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AVAILABLE STREET FURNITURE
FOR
REDEVELOPMENT PROJECTS
BOSTON, MASSACHUSETTS

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AVAILABLE STREET FURNITURE
FOR
REDEVELOPMENT PROJECTS
BOSTON, MASSACHUSETTS

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Report By:

Wallace B. Orpin, P. E.

Chief Engineer and Director of Site Development

Boston Redevelopment Authority

Engineering Division

Boston, Massachusetts

AUGUST 1963

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1.0 FOREWORD

The purpose of this report by the Engineering Division of the Boston Redevelopment Authority is to furnish to the Authority information relative to the availability of street furniture which may be considered suitable for use in the Redevelopment Program. The report is concerned with materials and designs currently being manufactured and contains recommendations for certain items of furniture which are of contemporary design. Some of the items considered have not been redesigned by manufacturers or by qualified industrial designers for many years. The Engineering Division would recommend redesign of such items only if economically justified and if redesign and re-tooling would not result in unwarranted expense.

The report has been prepared through the cooperation of representatives of the outstanding manufacturers of street furniture and

City Departments of a number of the large cities of the nation who have supplied both engineering and design data (see Appendix) thus providing a basis for the selection of the recommended furniture.

Inasmuch as the Government Center and the Washington Park projects are currently in the execution stage, this report information is of immediate interest for the establishment of design standards prior to the time when such furniture must be procured. Standards should be established within the next 30 days so that logical design and execution can be accomplished.

2.0 CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations of this report are based on a comprehensive study of available street furniture by numerous manufacturers, as well as on information solicited from City Departments of the larger cities from coast to coast. All manufacturers were very cooperative in supplying information and in several cases offered the time and design ability of their engineering staffs to assist the Authority in its intention of selecting the very best designed and manufactured street furniture of any city in the nation.

This is not a difficult assignment and definitely does not require extensive studies, reports and redesign. With the cooperation of the Public Works Commission, Fire Commissioner, Police Commissioner, Traffic and Parking Commissioner and Parks and Recreational Commissioner, firm standards could be established.

in 30 days. The only possible outside expense involved might be the consulting and design services of a top-flight and practical Industrial Designer. The manufacturers will work with the Authority on any redesign as they are anxious to keep their products competitive. The Industrial Designer might be used primarily as a consultant in the final selection of Redevelopment standards.

2.1 LIGHTING STANDARDS AND FIXTURES

At the present time most of the street lighting is installed and maintained by the Boston Edison Company and rented to the city. If this policy is continued in Redevelopment Program areas federal funds will not be involved. If the city installs the complete lighting system or any part thereof, such as main ducts and cables, manholes, lateral ducts and cables, lighting standards and fixtures, expenditures for city-installed work will be eligible for federal fund participation. It is believed that a policy decision should be reached in connection with the foregoing as soon as feasible as these installations will be required in the near future.

There is an abundant variety of well designed contemporary types of standards and fixtures available. The selection of suitable components should not be difficult. It is recommended that 3 basic combinations be selected depending upon the location in which each is to be used, as:

1. Residential Street Lighting.
2. Major Street or Arterial Lighting.
3. Government Center, West End, Waterfront, North Terminal, Central Business District and possibly other similar project areas.

2.2 FIRE HYDRANTS

Redesign of this item would be very costly and it is questionable whether competitive bids could be received. We recommend that the Darling Fire Hydrant which has the cleanest design be adapted as the standard for Redevelopment areas.

2.3 POLICE SIGNAL BOXES AND STANDARDS

We strongly recommend that with the approval of the Police Commissioner and Fire Commissioner a multi-purpose telephone Emergency System be started in the Redevelopment areas. Many large cities are now using such a system which can be on a rental basis with the New England Telephone & Telegraph Company installing the system and providing 24-hour maintenance and repair or a system being manufactured by independent companies which if installed jointly by the City, the Police Department and Fire Department would be eligible for federal funds. If the system is installed and maintained by the New England Telephone & Telegraph Company such a system would not be eligible.

2.4 FIRE ALARM BOXES AND STANDARDS

As with the Police Signal system we strongly recommend that a joint Police and Fire telephone Emergency system be started. This does not mean that the existing telegraph-type Fire Alarm system be abandoned. The new system can work with the existing and in stages the complete Police and Fire systems could be converted to the modern Emergency system. We believe that this should be done in the Redevelopment areas in order to modernize the existing Police and Fire systems with federal funds supplying a portion of the expense.

2.5 STREET AND TRAFFIC SIGNS

We recommend that reflective-type signs be used with aluminum brackets. Major streets are not usually marked and as Boston desires to please the tourist trade we recommend that the major and minor street name be used at each and every intersection.

2.6 REFUSE RECEPTACLES

We recommend for mounting on lighting standards or any street pole that the refuse receptacle manufactured by Vega Industries, Inc. (Plate 3.6.6) be used. This is a well designed receptacle. We do not recommend the open wire basket type now used in Boston.

For street or park use there are several receptacles which might be used. We have no definite recommendations as to a particular receptacle which would be best suited for the Redevelopment program (Plates 3.6.1, 3.6.2, 3.6.3, 3.6.4 and 3.6.6)

3.0 DISCUSSION

3.1 Lighting Standards and Fixtures

Lighting standards, because of their multitude and prominence, are probably the most important single item of street furniture to be considered. Fortunately, this is a highly competitive field and a number of very capable manufacturers have developed excellent contemporary designs. In particular, the firms of Pfaff & Kendall and Sterner Lighting, Inc., have worked on special problems for the New York Port Authority, the New Haven Redevelopment Authority, the Boston Prudential Center and other redevelopment authorities. It seems apparent that there will be no need to design a special standard for the Boston Redevelopment program.

It appears probable that three types of standards would be established; that is, one type for residential streets, a second for

major streets and a third for the Government Center, the North Terminal Area, the Waterfront and the Central Business District.

Inasmuch as the selection of fixtures is a problem for a lighting design engineer, the electrical characteristics of the different types of fixtures is not touched upon in this report. However, it is noted that there are many well designed contemporary fixtures available and no special design need be undertaken. The spacing and location of the standards and fixtures will depend upon the specific type of each which is ultimately selected.

Lighting standards are generally available in the following listed materials:

1. Steel
2. Concrete
3. Spun Aluminum

In the past, standards have also been fabricated of cold-rolled aluminum but these have almost entirely been replaced by spun aluminum. The steel standards are lowest in original cost but require periodic maintenance. Concrete and aluminum standards require virtually no maintenance. The aluminum structures are generally more decorative and are available in colors, such as dark red, silver, light blue, dark green, black, gold and presumably in other colors by special order. Certain colors are not suitable and if color is desired the manufacturing process should be carefully checked.

A few typical standards and brackets which are currently available are illustrated on PLATES 3.1.1 through 3.1.7. These are products of the Union Metal Manufacturing Company and the Concrete Division of the American Concrete Corporation. As indicated in the foregoing and as subsequently discussed, similar products are readily available from a number of other manufacturers.

It will be necessary for the Public Works Commissioner, City of Boston, to establish a lighting policy for Redevelopment areas. At the present time practically all street lighting is furnished and maintained by the Boston Edison Company on a rental basis. If the City is to benefit by Federal funds it is strongly recommended that the City or the Authority contract for the complete lighting system (main ducts and cables, manholes, lateral ducts and cables, lighting standards and lighting fixtures) for Redevelopment projects.

3.1.1 Union Metal Manufacturing Company

This company manufactures three types of lighting poles: Steel, Spun Aluminum and Cold-rolled Aluminum. Due to manufacturing advancements in spun aluminum the cold-rolled aluminum poles are not a major factor. Price wise steel is cheaper than spun aluminum and cheaper than the concrete poles made by the Concrete Division of this parent company. Poles can be procured in four cross-sectional shapes of plain round, fluted, octagonal and square designs. Spun aluminum round poles are furnished in neutral aluminum color. Pole shafts are

furnished with polished surfaces. Octaflute shafts are furnished in a wet blast silver gray satin finish. A great variety of poles are available. (PLATES 3.1.1 through 3.1.6)

3.1.2 American Concrete Corp. Division of Union Metal Mfg. Co.

This company manufactures stress-spun concrete standards in octagonal cross-section and normally with two finishes: Finish "G" is black and white in color with a smooth, water-polished surface obtained by machine carborundum finishing process. Finish "N" is light gray in color and a natural cement finish as released from the smooth metal molds. (PLATE 3.1.7)

3.1.3 Pfeff & Kendall

This company maintains a design and engineering staff to handle special problems in the field of out door lighting. They have submitted to the Archetects of the Prudential Center a design for the street lighting within the center and are willing and able to work with the Boston Redevelopment Authority Design staff on any special pole or fixture they might desire. They produce designed lighting to complement both building and landscape and create interesting new forms. Their complete catalogue includes aluminum lighting standards, davit type installations, flood lighting poles and lighting fixtures. We highly recommend this company as flexible in their approach to lighting problems and with a capable design and engineering staff to produce standards and fixtures capable of

solving any lighting problem (PLATES 3.1.8 through 3.1.12)

3.1.4 Sterner Lighting, Inc.

This company although compartively new in the outdoor lighting field certainly lives up to their "New Horizons in Outdoor Lighting". Their Circa-Lite with Hinge-O-Matic base construction could be used for residential lighting and is available in 5,000 to 20,000 lumen output (PLATE 3.1.13). Their single and double Davit-Lite could also be used for residential or major street lighting. Their Trianon light is unusual in design and can be procured in 5,000 to 20,000 lumen output (PLATE 3.1.13). Their Globe-Lite mercury with seamless non-breakable butyrate plastic globe can also be used for residential lighting, (PLATE 3.1.14). We highly recommend this company who like Pfaff & Kendall have a well qualified design and engineering staff to handle special outdoor and street lighting problems.

3.1.5 Millerbernd Manufacturing Co.

This company manufactures spun aluminum standards and two of their davit type are shown on Plate 3.1.15.

3.1.6 Halophone Company, Inc.

A very pleasing residential or park standard and fixture is shown on Plate 3.1.16. This company can supply a large number of excellently designed fixtures.

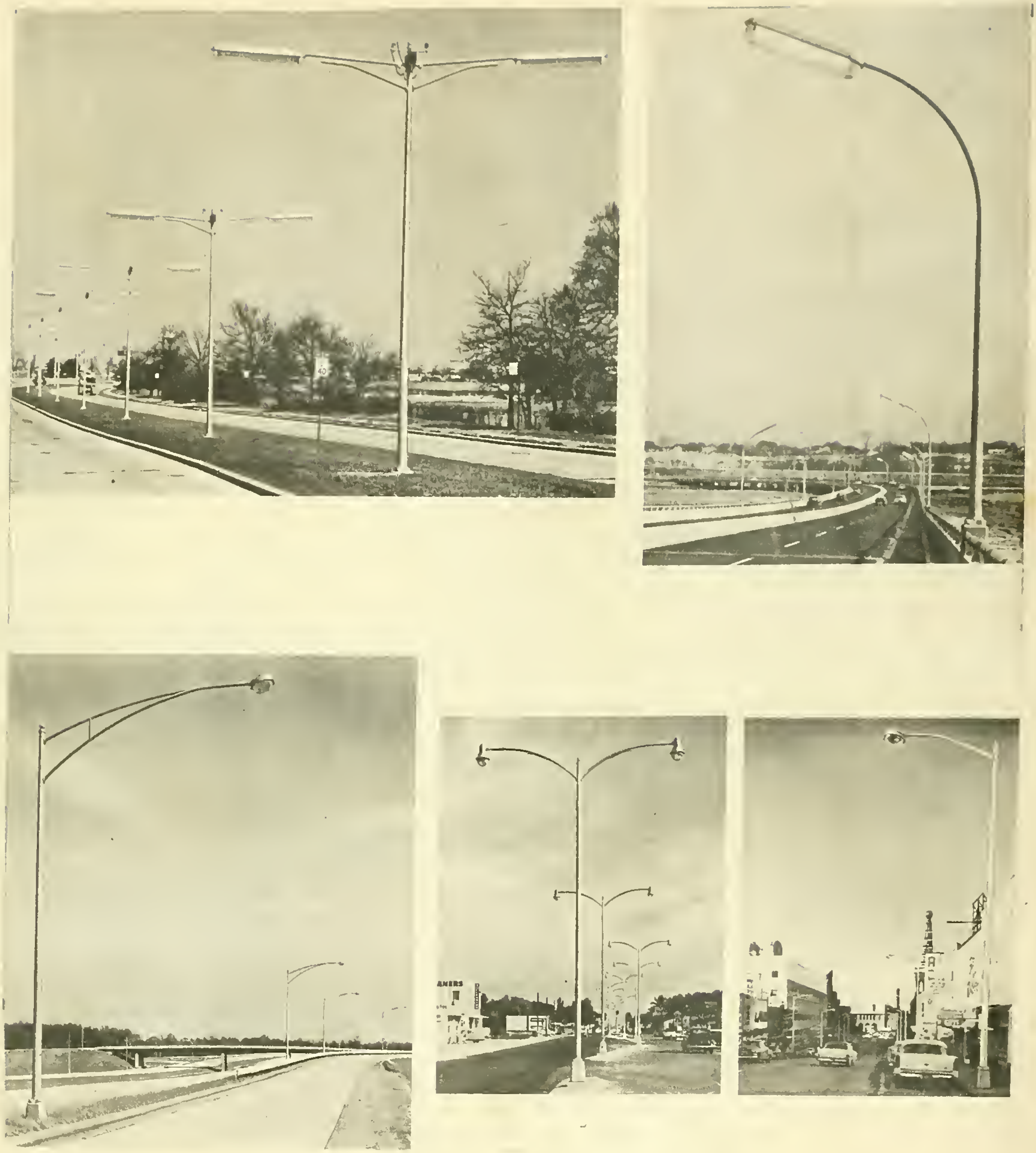
3.1.7 Line Material Industries

This company manufactures a complete line of lighting fixtures. A number of well designed residential fixtures are shown on Plate 3.1.16.

3.1.8 Revere Electric Manufacturing Co.

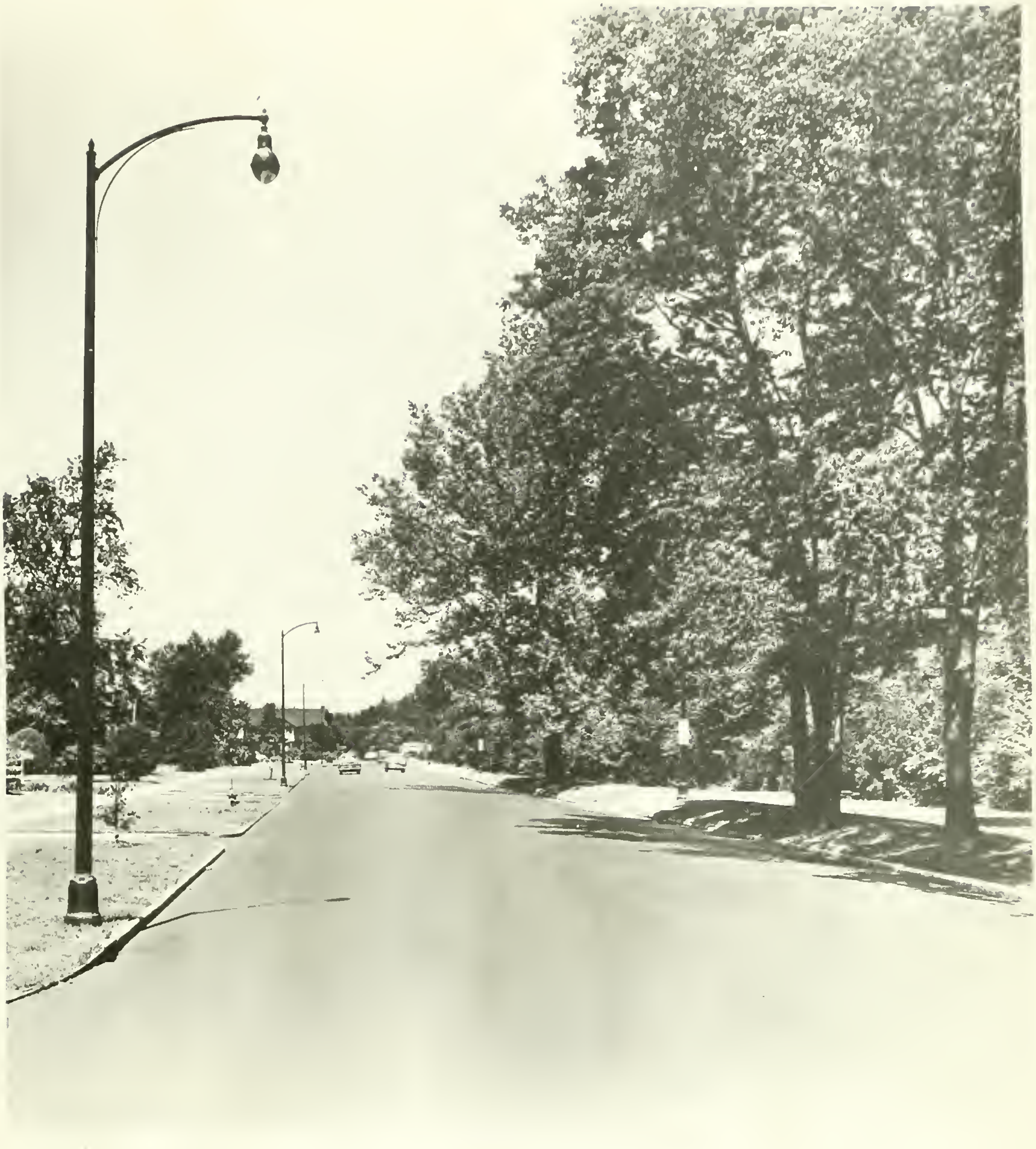
On Plates 3.1.17 and 3.1.18 two residential lighting fixtures are shown. These fixtures could also be used as supplemental lighting in parks, around buildings and other isolated off-street areas.

Reference is made to the Appendix for the names of other manufacturers of both lighting standards and fixtures.



UNION METAL MANUFACTURING COMPANY

PLATE 3.1.1

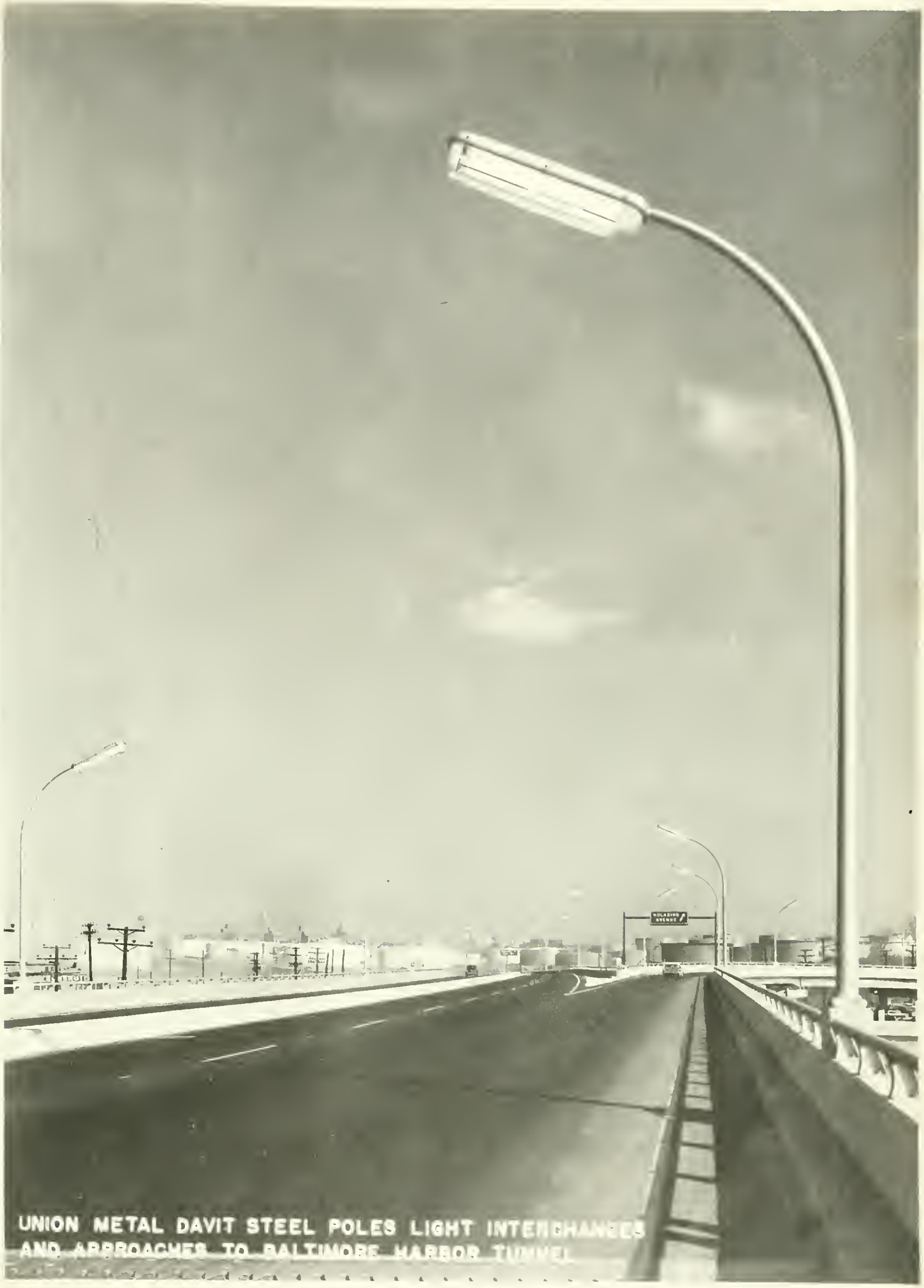


THE UNION METAL MANUFACTURING COMPANY

Design 403A
Octaflute-Steel
Transformer Base

Design 103A
Octaflute-Sput Aluminum
Transformer Base

Design 103H
Octaflute-Cold-Rolled Aluminum
Transformer Base



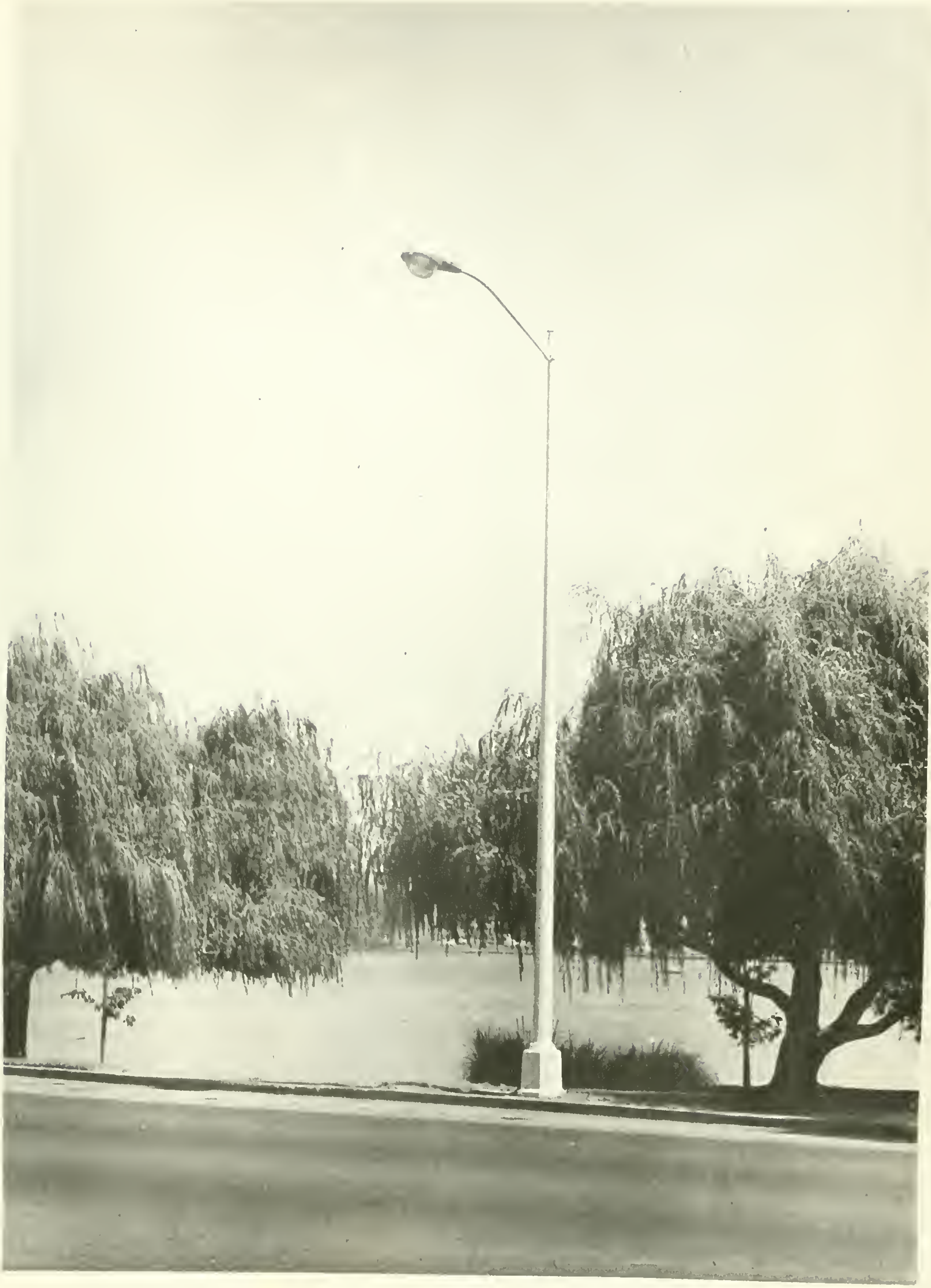
UNION METAL DAVIT STEEL POLES LIGHT INTERCHANGES
AND APPROACHES TO BALTIMORE HARBOR TUNNEL

THE UNION METAL MANUFACTURING COMPANY

Design 900
Round-Steel
Anchor Base

Design 920
Round-Spun Aluminum
Anchor Base

PLATE 3.1.3



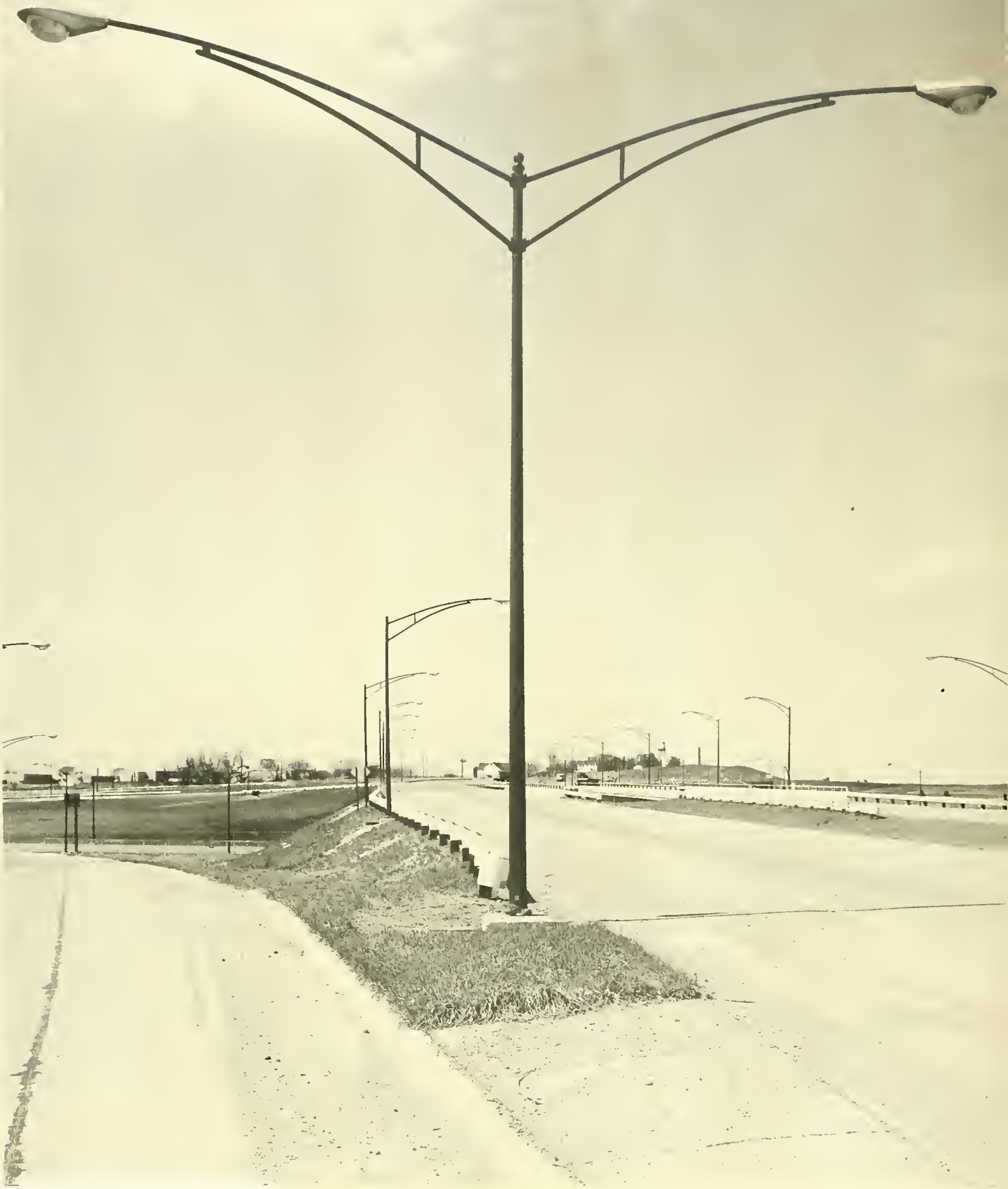
THE UNION METAL MANUFACTURING COMPANY

Design 1402A
Round-Steel
Transformer Base

Design 594C
Round-Spun Aluminum
Transformer Base

Design 1152H
Round-Cold-Rolled Aluminum
Transformer Base

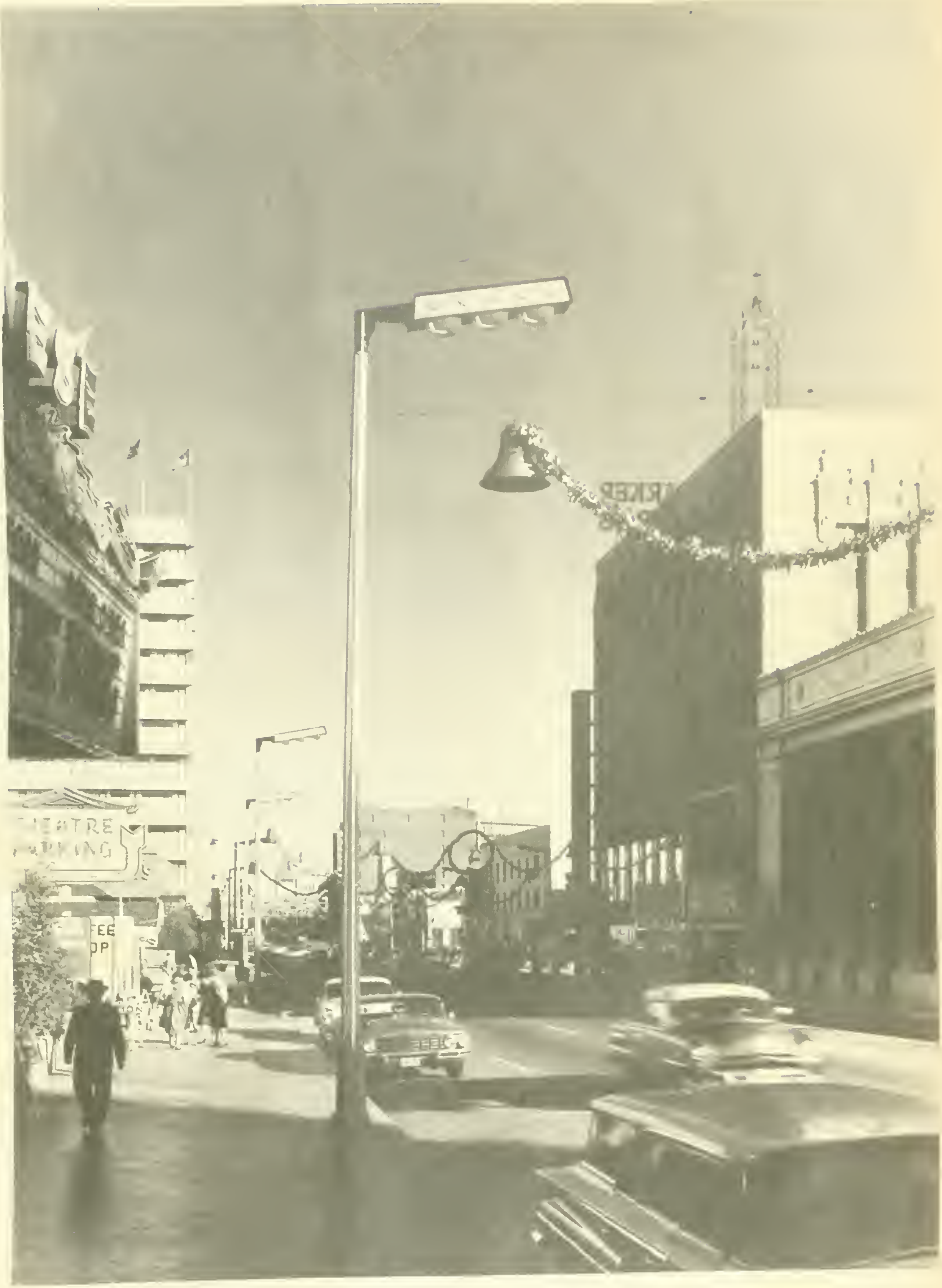
PLATE 3.1.4



THE UNION METAL MANUFACTURING COMPANY

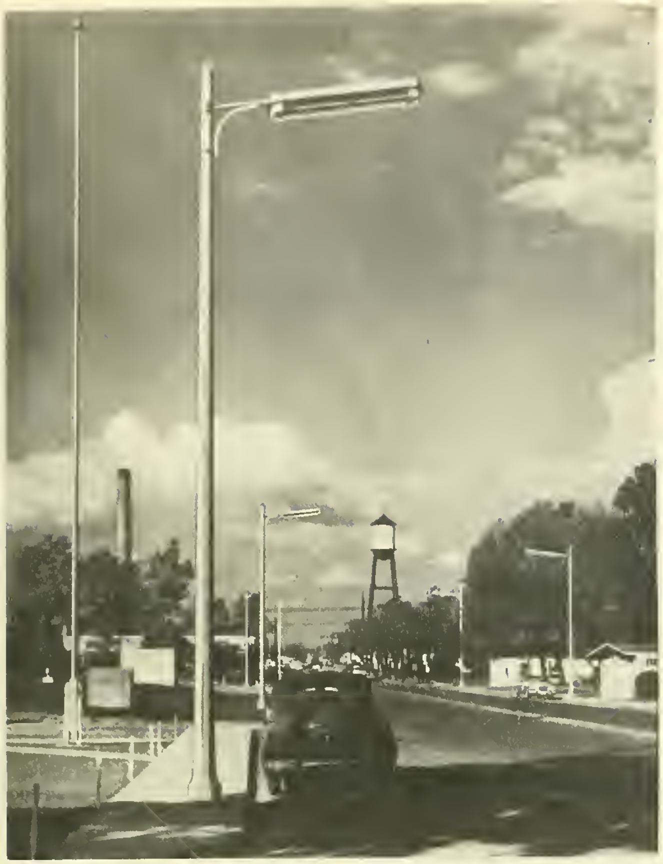
Design 440A	Design 140C	Design 140H
Round-Steel	Round-Spun Aluminum	Round-Cold-Rolled Aluminum
Anchor Base	Anchor Base	Anchor Base

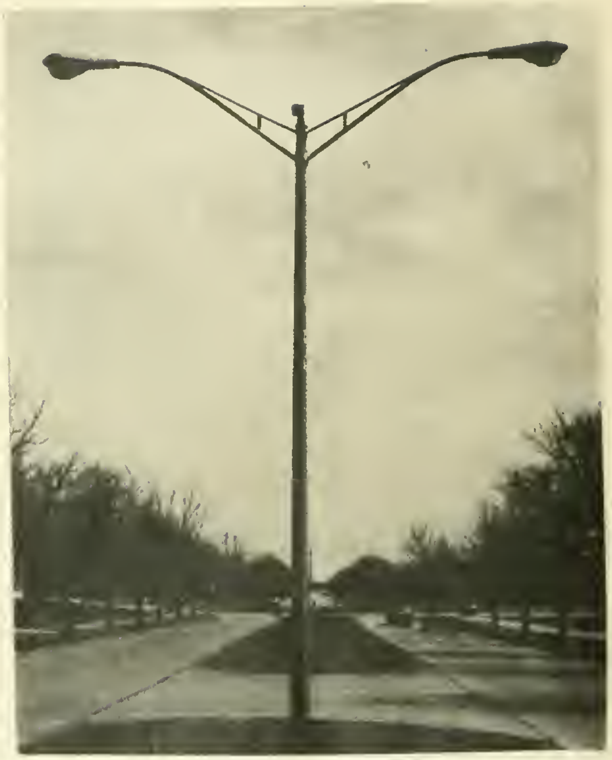
PLATE 3.1.5

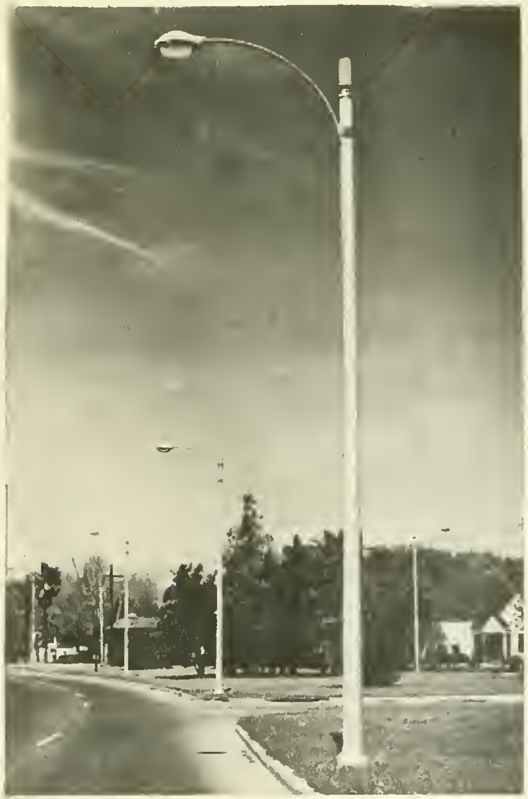


THE UNION METAL MANUFACTURING COMPANY

PLATE 3.1.c







STRESS-SPUN CONCRETE POLES

AMERICAN CONCRETE CORP.
Division of
UNION METAL MANUFACTURING CORP.

PLATE 3.1.7

DESIGNED LIGHTING
creates interesting new forms

In accomplishing its many new roles in outdoor illumination, DESIGNED LIGHTING has taken on entirely revolutionary structural forms. These new forms, in high-strength aluminum, have a fresh, welcome "feel." Freed from tradition, they are definitely in step with present-day architectural trends.

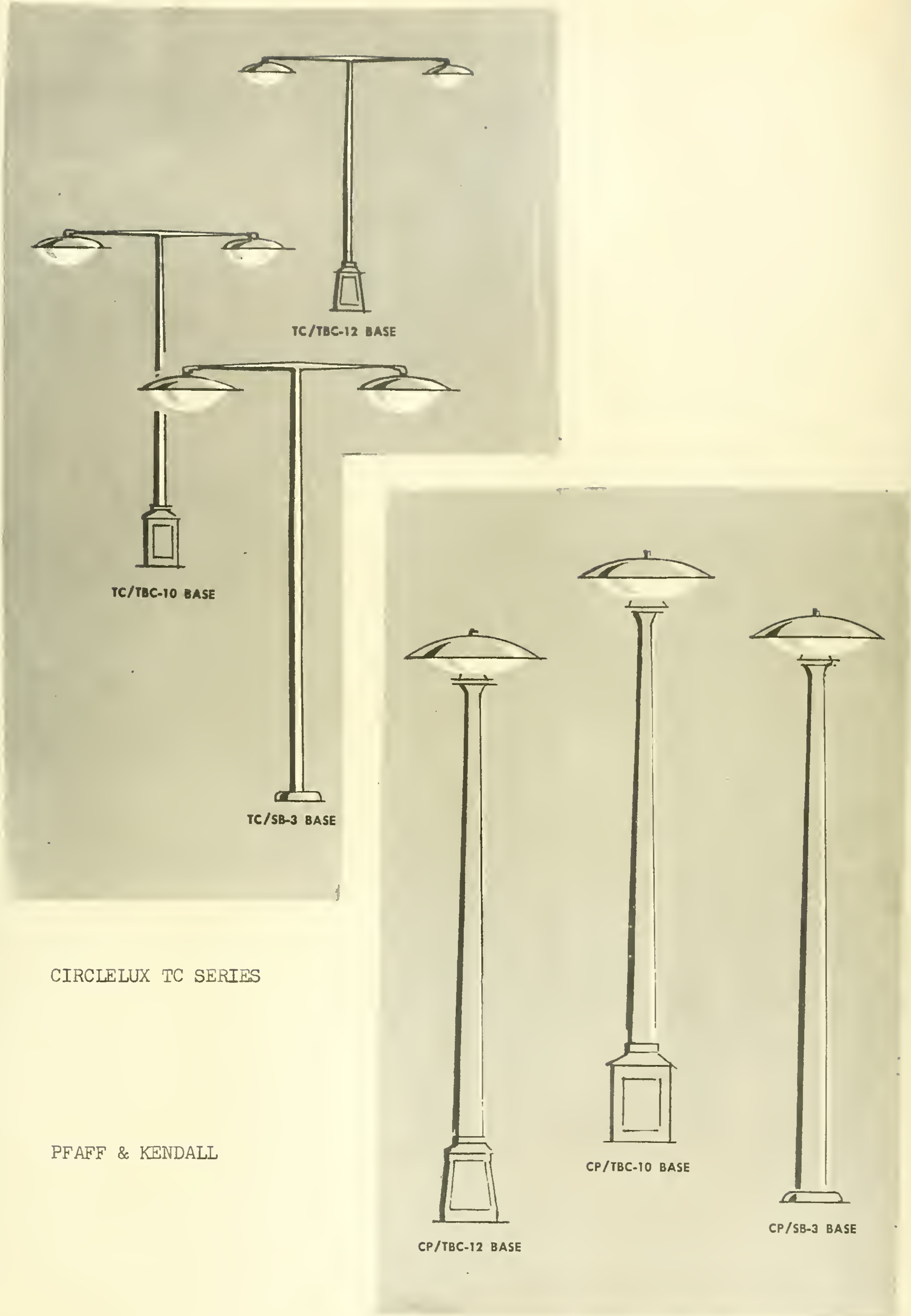
downtown "whiteway" installation • Grand Rapids, Michigan • *davit model: FD-1042896/SB*

PFAFF & KENDALL

toll booth lighting installation • Sunshine State Parkway, Florida • consulting engineer: Howard, Needles Tammen and Bergendoff • *lighting standard model: ET-8430180 TB-1*

downtown "whiteway" lighting installation • White Plains, New York • *lighting standard model: E-843072/SB*

PFAFF & KENDALL



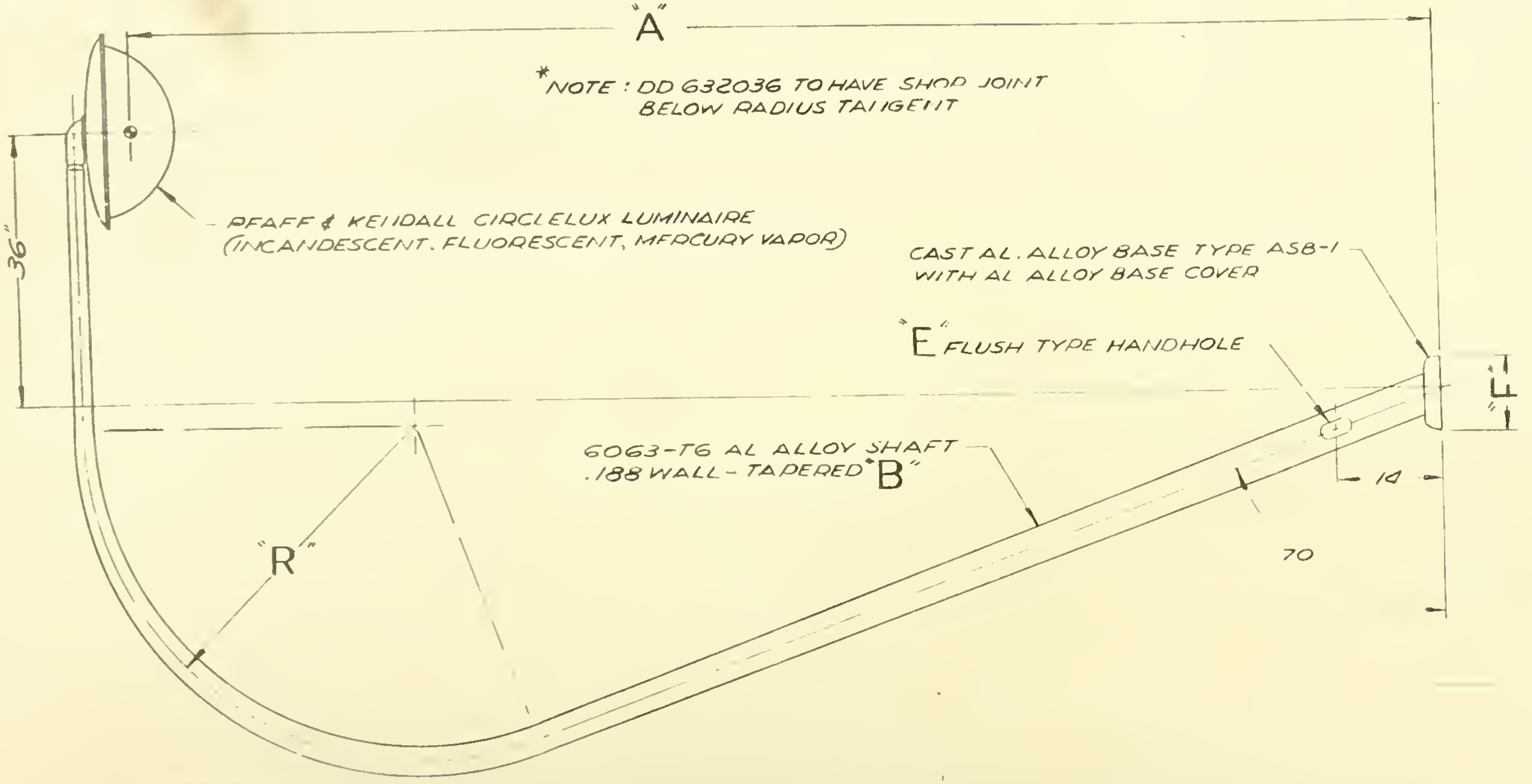
CIRCLELUX TC SERIES

PFAFF & KENDALL

CIRCLELUX CP SERIES

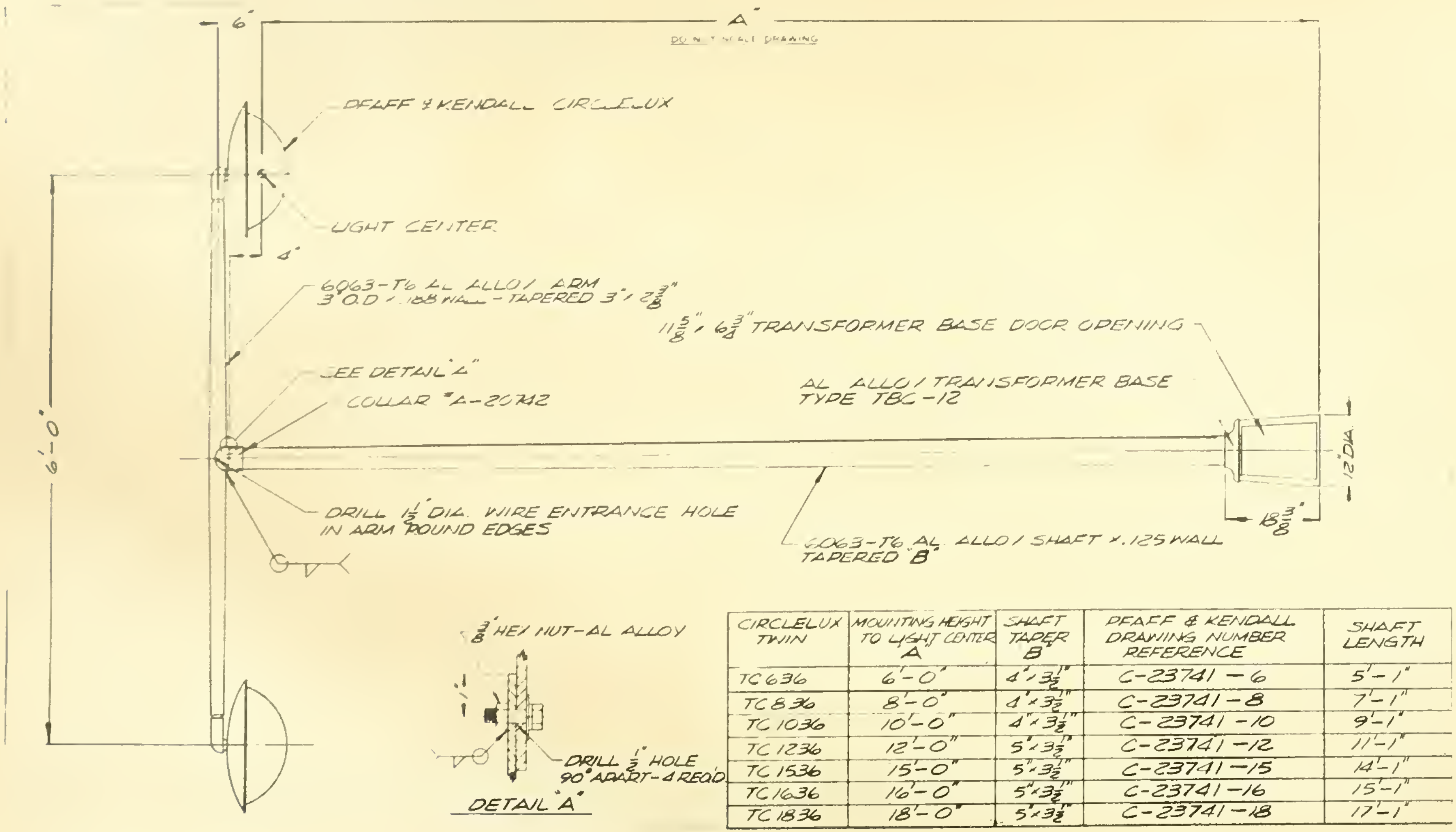
PLATE 3.1.10

CIRCLELUX DAVIT	MTG HEIGHT TO LIGHT CENTER "A"	SHAFT TAPER "B"	BOLT CIRCLE "C"	"D"	HANDHOLE "E"	BASE DIA "F"	RADIUS "R"	PFAFF & KENDALL DWG NO REF.
DD 42836	8 — 0	$4 \times 2\frac{3}{4}$	8	$5\frac{5}{8}$	$2\frac{1}{2} \times 5$	$10\frac{1}{4}$	3 — 0	C-19306-8
DD 421036	10 — 0	$4 \times 2\frac{3}{4}$	8	$5\frac{5}{8}$	$2\frac{1}{2} \times 5$	$10\frac{1}{4}$	3 — 0	C-19306-10
DD 531236	12 — 0	$5 \times 2\frac{3}{4}$	9	$6\frac{3}{8}$	3×5	$11\frac{1}{4}$	4 - 0	C-19306-12
DD 531536	15 — 0'	$5 \times 2\frac{3}{4}$	9	$6\frac{3}{8}$	3×5	$11\frac{1}{4}$	4'—0	C-19306-15
DD 531836	18 — 0	$5 \times 2\frac{3}{4}$	9	$6\frac{3}{8}$	3×5	$11\frac{1}{4}$	4 — 0	C-19306-18
DD 632036	20 — 0	$6 \times 2\frac{3}{4}$*	10	$7\frac{1}{16}$	3×5	$12\frac{1}{4}$	4 — 0'	C-19306-20


"A"
*NOTE : DD 632036 TO HAVE SHOP JOINT BELOW RADIUS TANGENT
36"
PFAFF & KENDALL CIRCLELUX LUMINAIRE (INCANDESCENT, FLUORESCENT, MERCURY VAPOR)
CAST AL. ALLOY BASE TYPE ASB-1 WITH AL ALLOY BASE COVER
"E" FLUSH TYPE HANDHOLE
"F"
6063-T6 AL ALLOY SHAFT .188 WALL - TAPERED "B"
14
"R"
70

TRIANON
PFAFF & KENDALL

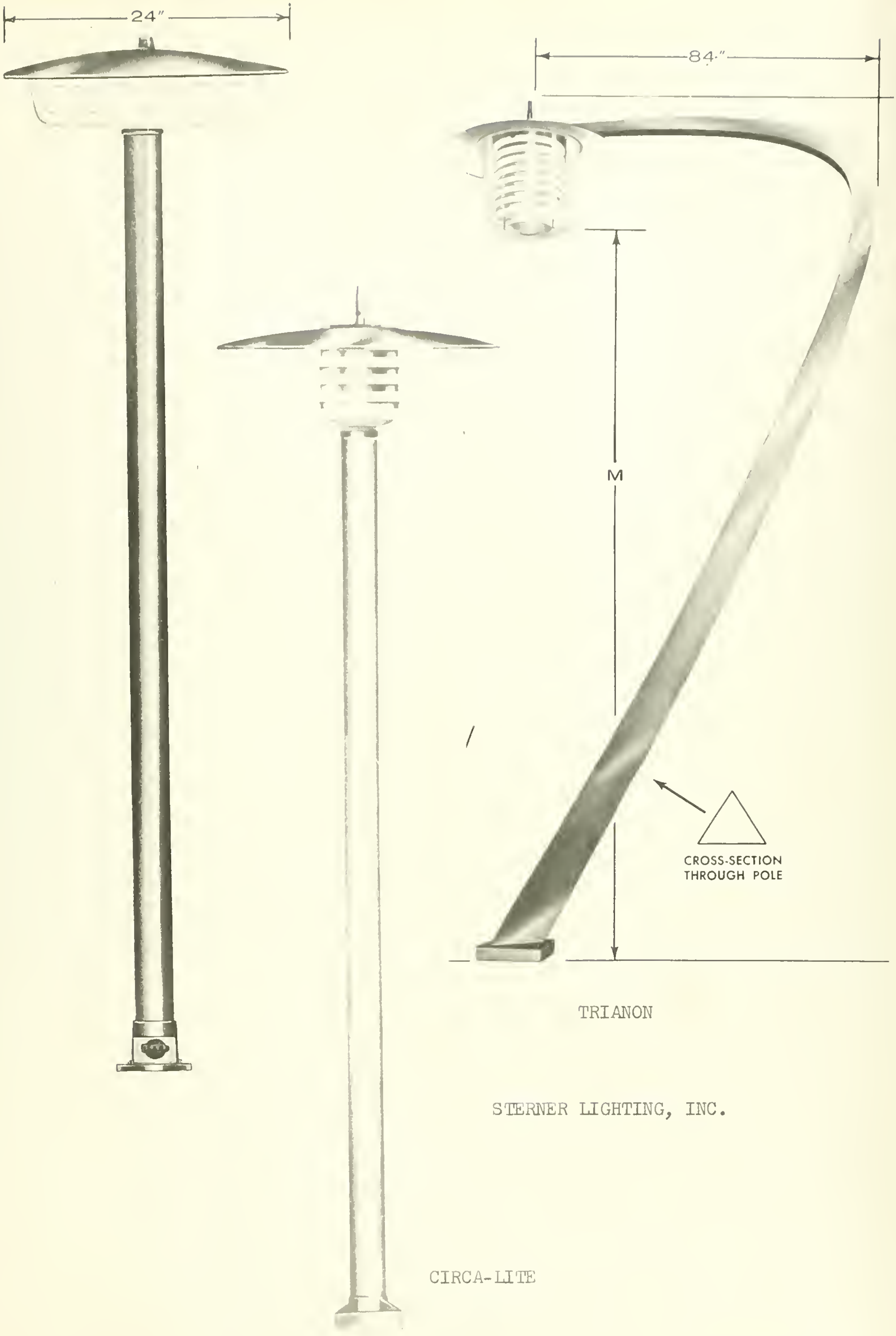
PLATE 3.1.11



CIRCLELUX TWIN	MOUNTING HEIGHT TO LIGHT CENTER "A"	SHAFT TAPER "B"	PFAFF & KENDALL DRAWING NUMBER REFERENCE	SHAFT LENGTH
TC 636	6'-0"	4" × 3 1/2"	C-23741 - 6	5'-1"
TC 836	8'-0"	4" × 3 1/2"	C-23741 - 8	7'-1"
TC 1036	10'-0"	4" × 3 1/2"	C-23741 - 10	9'-1"
TC 1236	12'-0"	5" × 3 1/2"	C-23741 - 12	11'-1"
TC 1536	15'-0"	5" × 3 1/2"	C-23741 - 15	14'-1"
TC 1636	16'-0"	5" × 3 1/2"	C-23741 - 16	15'-1"
TC 1836	18'-0"	5" × 3 1/2"	C-23741 - 18	17'-1"

PFAFF & KENDALL

PLATE 3.1.12

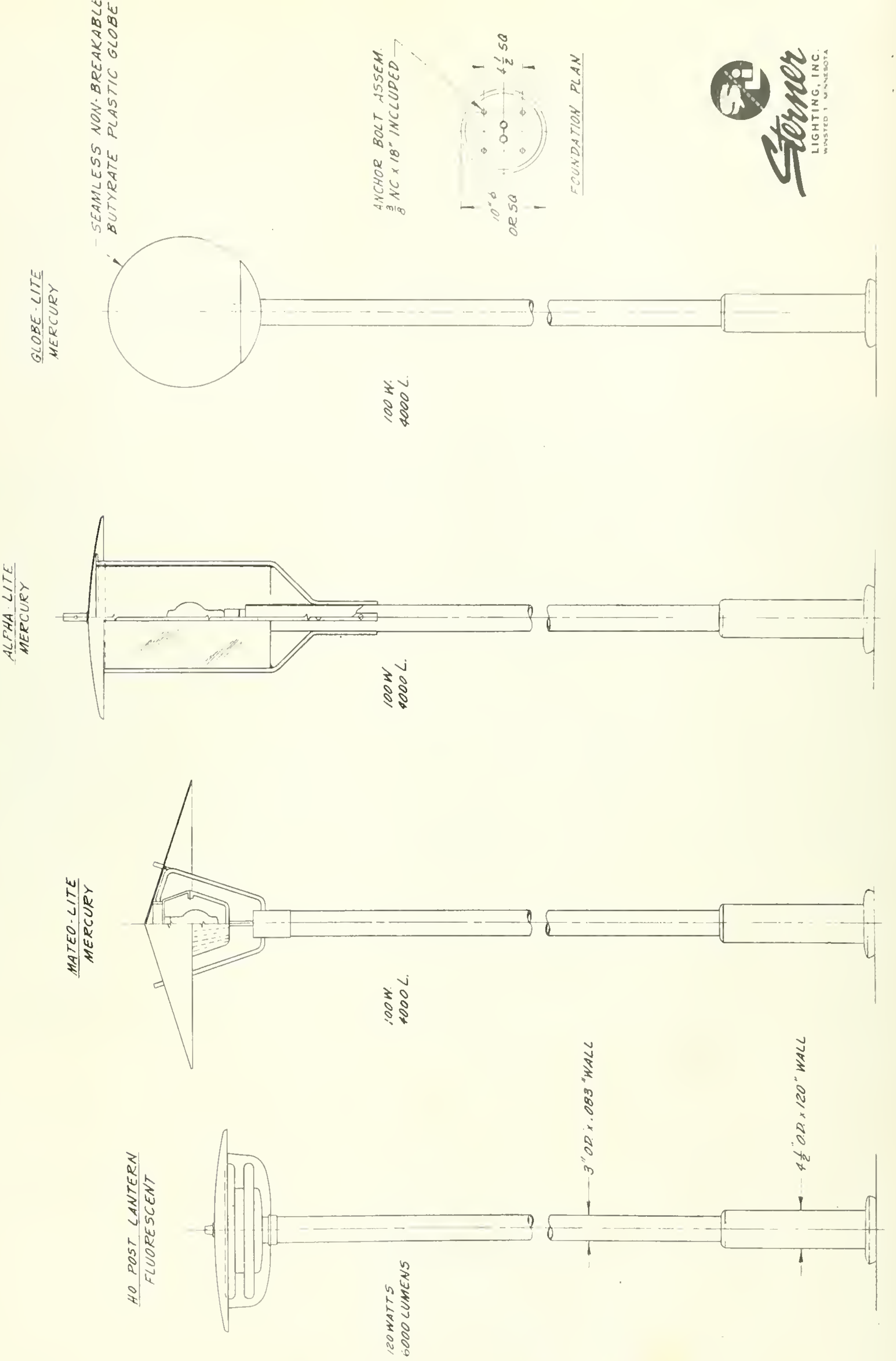


TRIANON

STERNER LIGHTING, INC.

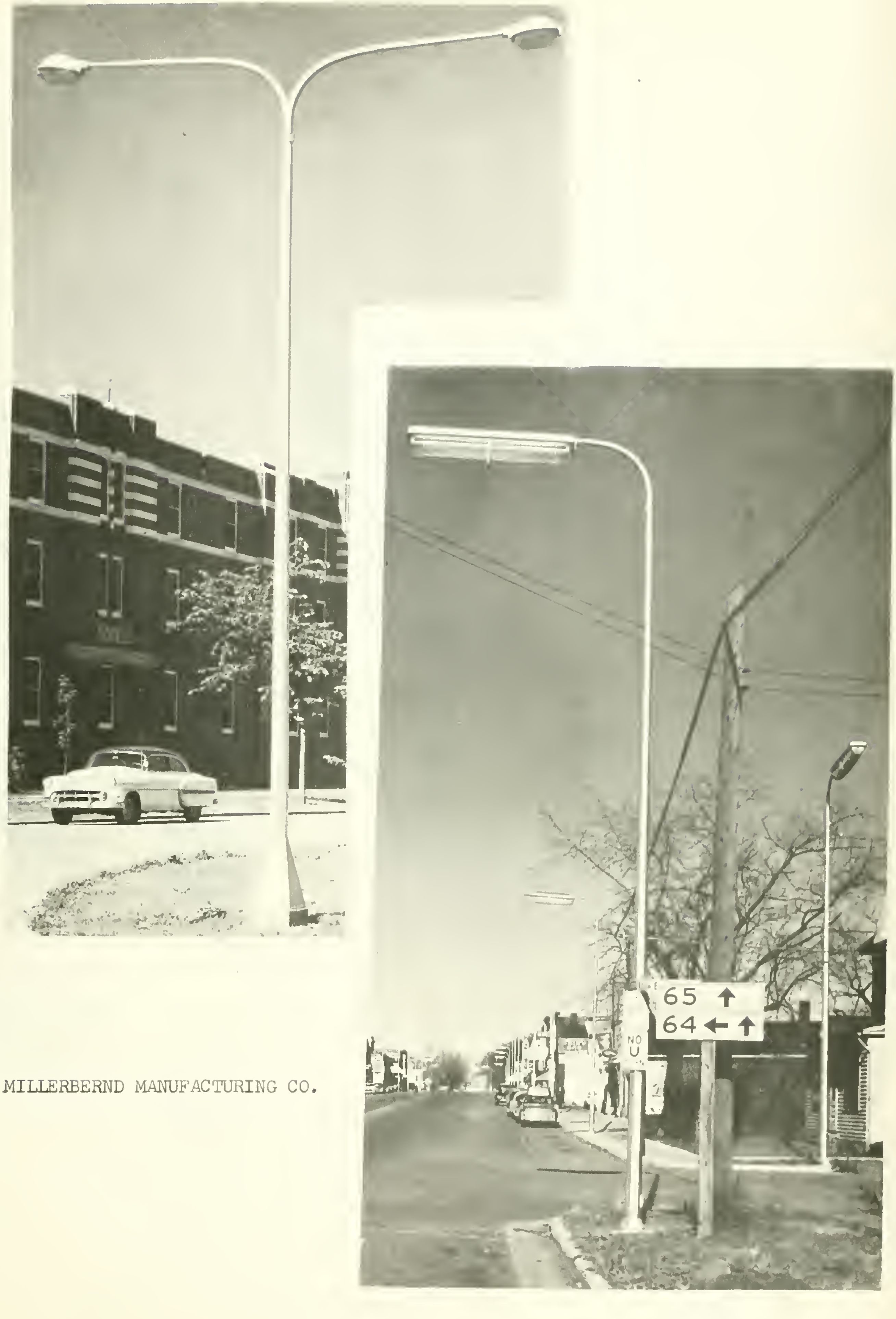
CIRCA-LITE

PLATE 3.1.13



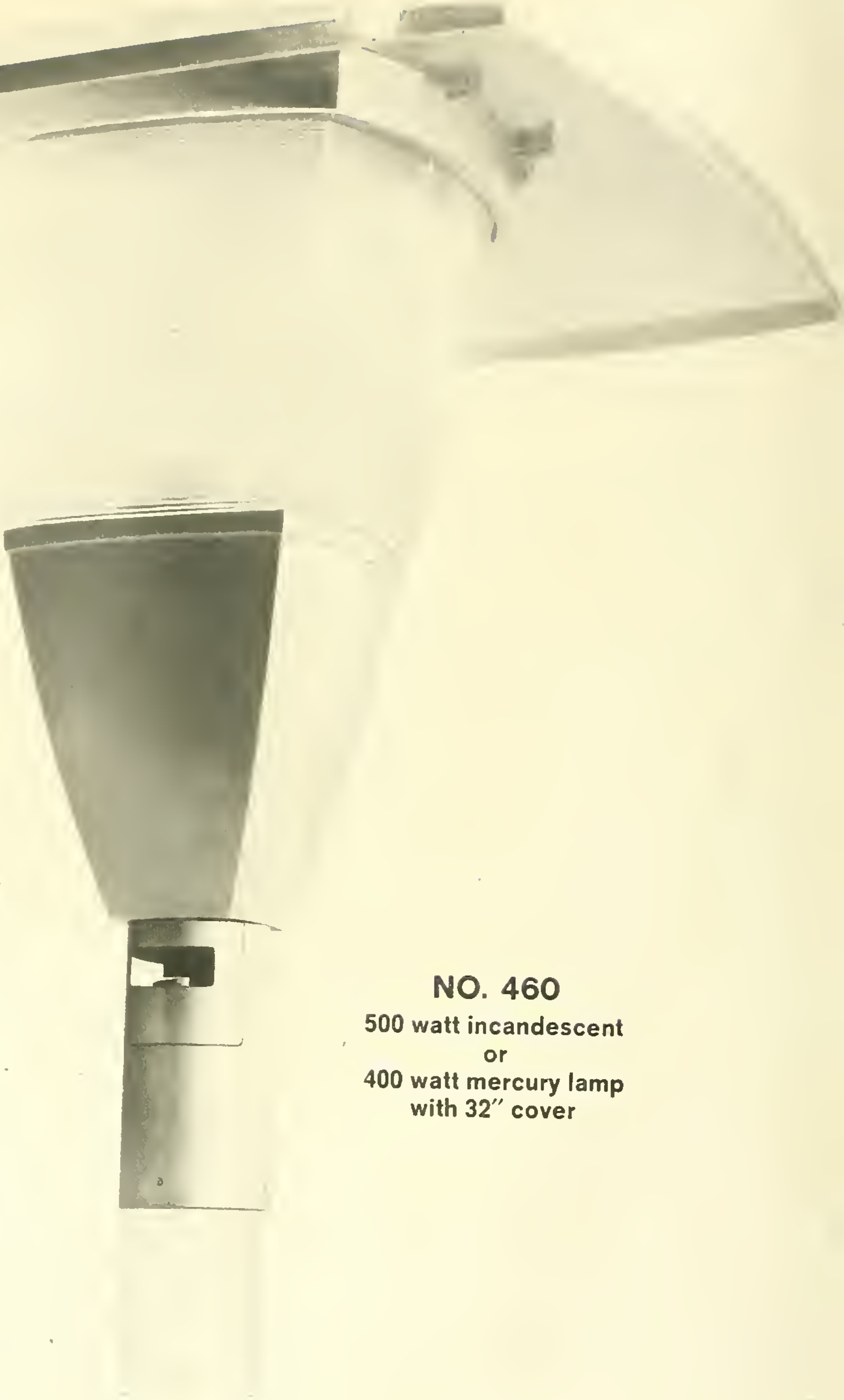
STERNER LIGHTING, INC.

PLATE 3.1.14



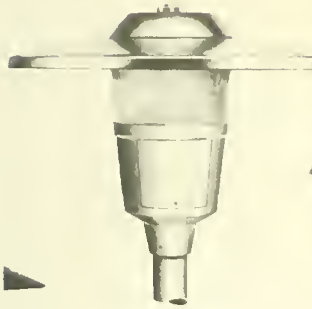
MILLERBERND MANUFACTURING CO.

PLATE 3.1.15

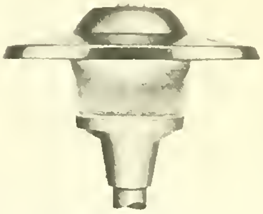


NO. 460
500 watt incandescent
or
400 watt mercury lamp
with 32″ cover

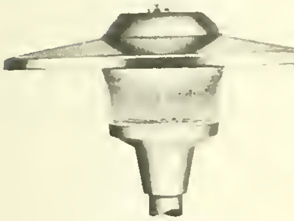
HOLOPHANE COMPANY, INC.



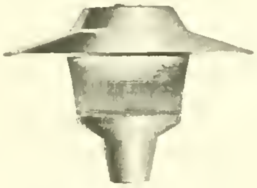
STYLEKING



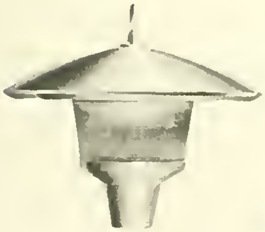
STYLETTE A



STYLETTE B



STYLETTE C

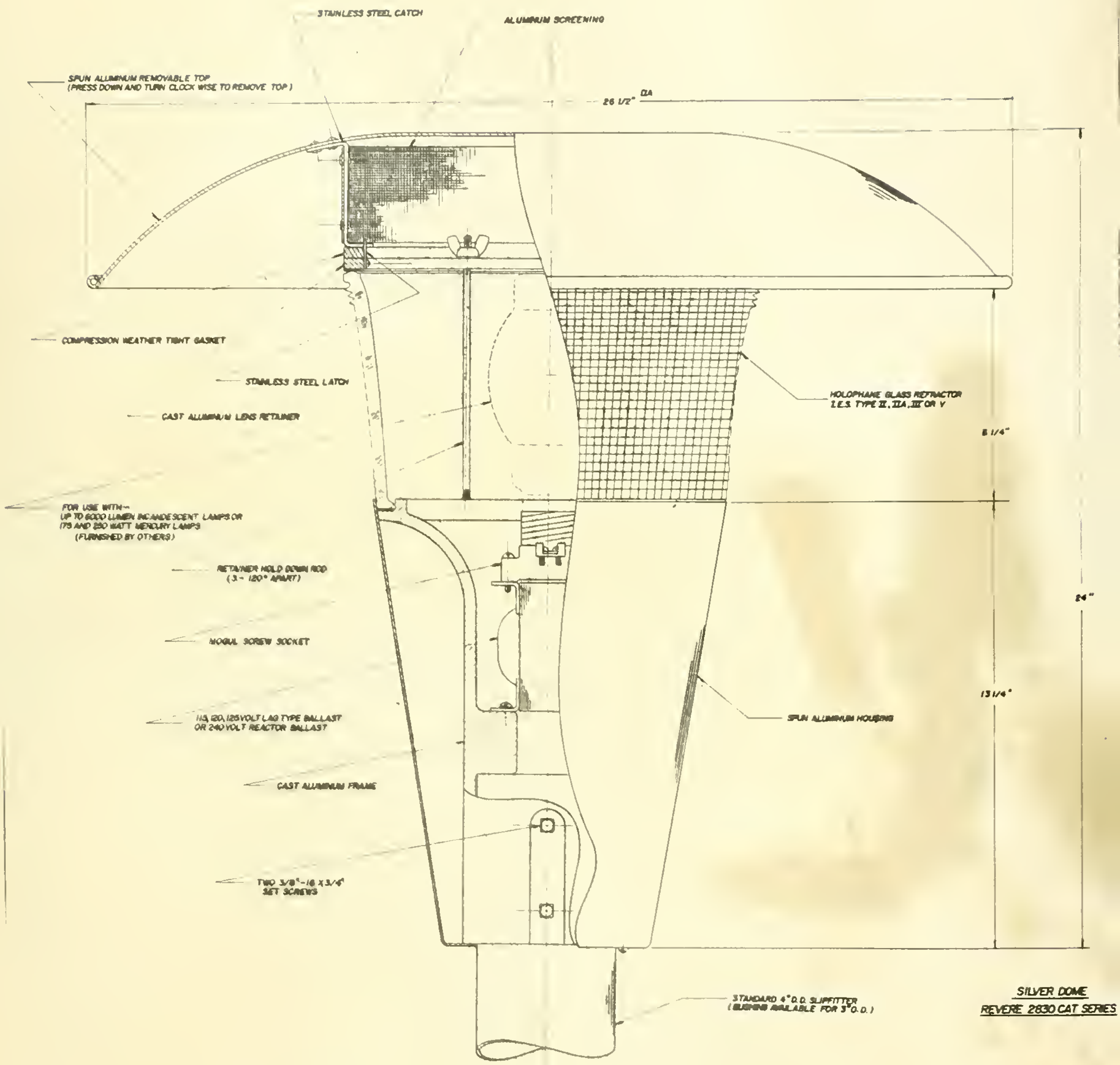


STYLETTE D

STYLETTE E

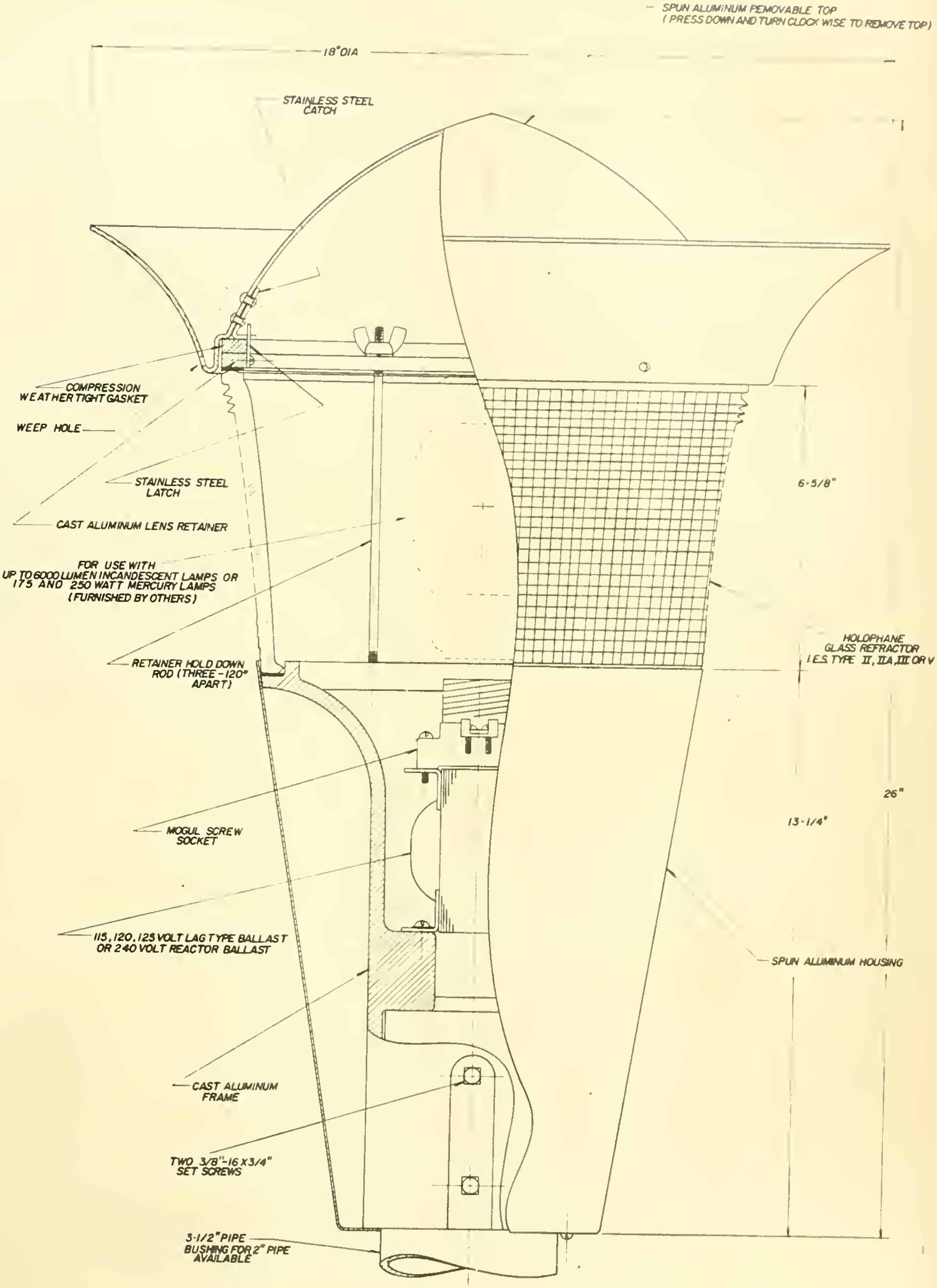
LINE MATERIAL INDUSTRIES

REVERE 2830 CAT. SERIES
DOME POST TOP LUMINAIRE


STAINLESS STEEL CATCH
ALUMINUM SCREENING
SPUN ALUMINUM REMOVABLE TOP
(PRESS DOWN AND TURN CLOCK WISE TO REMOVE TOP)
26 1/2" DIA
COMPRESSION WEATHER TIGHT GASKET
STAINLESS STEEL LATCH
CAST ALUMINUM LENS RETAINER
HOLOPHANE GLASS REFRACTOR
I.E.S. TYPE II, IIA, III OR V
8 1/4"
FOR USE WITH—
UP TO 6000 LUMEN INCANDESCENT LAMPS OR
175 AND 250 WATT MERCURY LAMPS
(FURNISHED BY OTHERS)
RETAINER HOLD DOWN ROD
(3 - 120° APART)
24"
MOGUL SCREW SOCKET
13 1/4"
115, 120, 125 VOLT LAG TYPE BALLAST
OR 240 VOLT REACTOR BALLAST
SPUN ALUMINUM HOUSING
CAST ALUMINUM FRAME
TWO 3/8"-16 X 3/4"
SET SCREWS
STANDARD 4" O.D. SLIPFITTER
(BUSHING AVAILABLE FOR 3" O.D.)
SILVER DOME
REVERE 2830 CAT SERIES

REVERE ELECTRIC MANUFACTURING CO.

REVERE 2810 SERIES
POST TOP LUMINAIRE


SPUN ALUMINUM REMOVABLE TOP
(PRESS DOWN AND TURN CLOCK WISE TO REMOVE TOP)
18" DIA
STAINLESS STEEL CATCH
COMPRESSION WEATHER TIGHT GASKET
WEEP HOLE
STAINLESS STEEL LATCH
CAST ALUMINUM LENS RETAINER
FOR USE WITH UP TO 6000 LUMEN INCANDESCENT LAMPS OR 175 AND 250 WATT MERCURY LAMPS (FURNISHED BY OTHERS)
RETAINER HOLD DOWN ROD (THREE - 120° APART)
MOGUL SCREW SOCKET
115, 120, 125 VOLT LAG TYPE BALLAST OR 240 VOLT REACTOR BALLAST
CAST ALUMINUM FRAME
TWO 3/8"-16 X 3/4" SET SCREWS
3-1/2" PIPE BUSHING FOR 2" PIPE AVAILABLE
6-5/8"
HOLOPHANE GLASS REFRACTOR I.E.S. TYPE II, IIA, III OR V
26"
13-1/4"
SPUN ALUMINUM HOUSING

REVERE ELECTRIC MANUFACTURING CO.

3.2 FIRE HYDRANTS

This item of street furniture will, unfortunately, probably have to be accepted in its present basic design. The Water Division of the City of Boston uses hydrants manufactured by Darling, Mueller and Smith. The Division has limited its purchases to these three hydrants, not only to reduce the number of replacement parts, but because they are of preferred design and manufacture. The exterior design of fire hydrants has not been changed for many years as there has been no reason for manufacturers to change their castings. Flush hydrants are available, and the City of Boston has a few of these but they are not favored and are considered impractical for winter use. It is believed that the Boston Fire Department would strongly object to having them installed in any part of the Redevelopment Program areas.

Of the three hydrants used by the City, the Darling Fire Hydrant (PLATE 3.2.1) has the most simple design. This piece of street furniture, like refuse receptacles, is a necessary and important item which cannot be tucked away out of sight.

The location and accessibility of the fire hydrant is of prime importance; and although it has been suggested that the hydrants could be incorporated into the street face of buildings, it is believed that the Fire Department would object to this as they desire the hydrant to be away from the actual fire for safety and operational reasons.

3.2.1 Darling Valve & Manufacturing Co.

This is one of the three fire hydrants which have been approved by the Water Division, Public Works Department, City of Boston. It is recommended only because of its cleaner details (Plate 3.2.1).

3.2.2 Mueller Company

This is the second of the three hydrants approved by the City (Plate 3.2.1).

3.2.3 A. P. Smith Manufacturing Co.

This is the third of the three hydrants approved by the City (Plate 3.2.1).

3.2.4 M & H Valve & Fittings Co.

This hydrant presents no advantage over those approved by the City and is not recommended over the Darling (Plate 3.2.2).

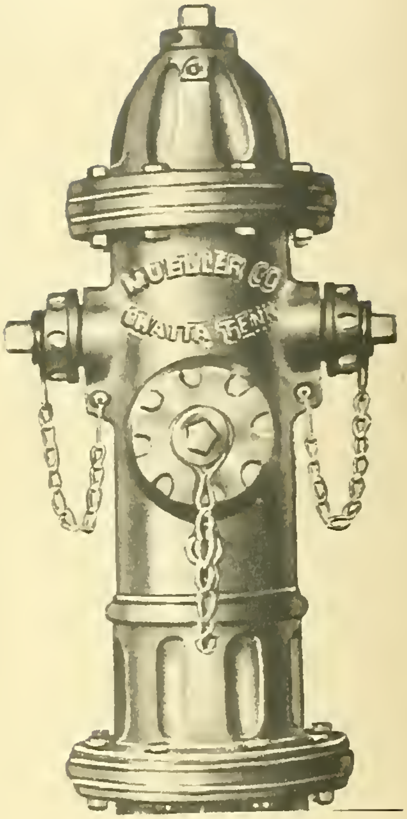
3.2.5 Kennedy Valve Manufacturing Co.

This hydrant, like the Darling, has a fairly simple design. It has no specific advantage in design over the approved fire hydrants of the City.

3.2.6 Traverse City Iron Works

This is a good looking fire hydrant but offers no advantages in design over the above described hydrants.

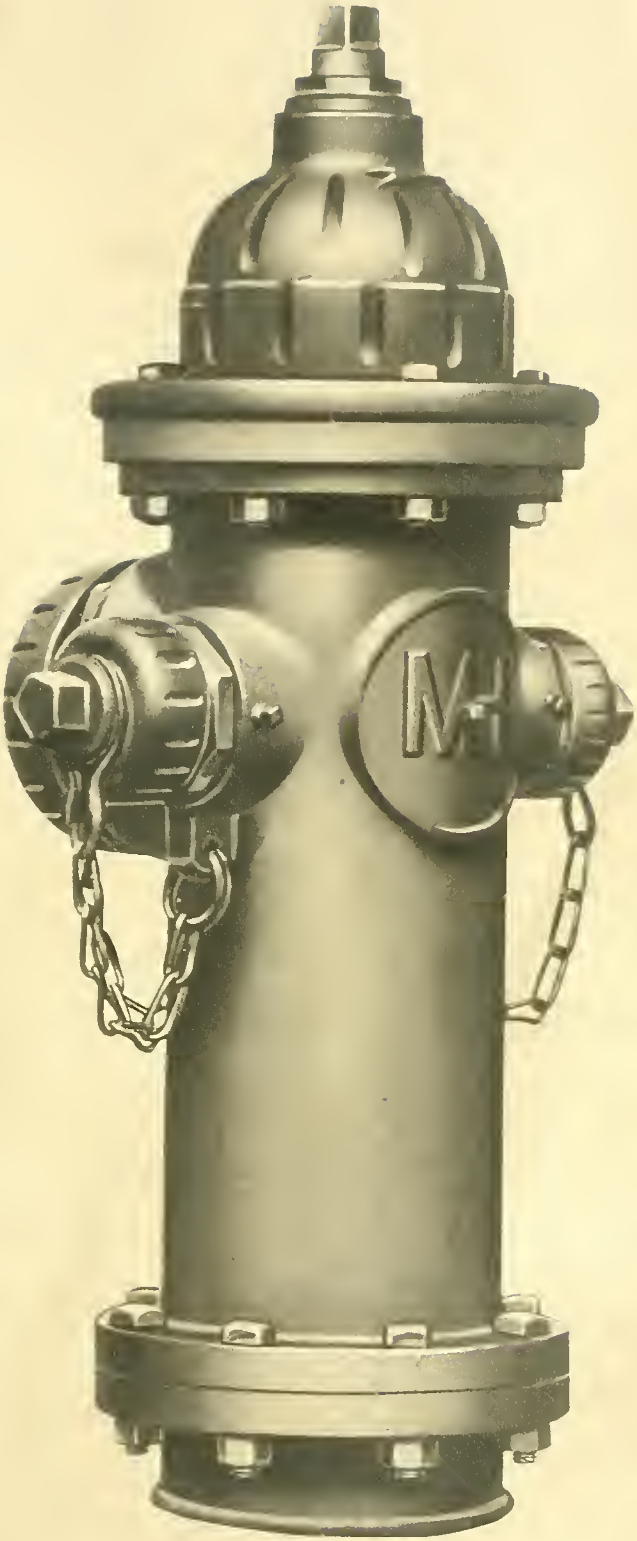
DARLING VALVE & MANUFACTURING CO.



MUELLER COMPANY

A. P. SMITH MANUFACTURING COMPANY

PLATE 3.2.1



M & H VALVE & FITTING COMPANY

PLATE 3.2.2

3.3 POLICE SIGNAL BOXES AND STANDARDS

Reference is made to Fire Alarm Boxes and Standards (Section 3.4) which follows. This is an item of street furniture which will require decisions by the Police Commissioner and Fire Commissioner of the City of Boston. We recommend that the two communication systems be combined into an Emergency Telephone System.

A number of the larger cities of the nation, particularly Miami, Florida (Section 3.4.1) have installed such a multi-purpose system. It serves Fire, Police, Emergency Calls, and Departments of the City.

If such a system could receive the approval of the Police Commissioner and the Fire Commissioner, the Redevelopment program could serve as a modernizing agency for the existing separate Police telephone system and the Fire telegraph-type alarm system.

This would not necessitate a complete abandonment of either system but the new Emergency Telephone System could be installed in Redevelopment areas, and the existing systems could be converted in stages to a modern communication network for both Police and Fire Departments.

The New England Telephone & Telegraph Company could install such an Emergency Telephone system on a rental basis which would not be eligible for federal funds. If the Police and Fire Departments should install a combined system (which is available from

several manufacturers) and contract with the New England Telephone and Telegraph Company for wire service and 24-hour maintenance and repair, any monies expended would be eligible for Federal funds.

This is one area where a top-flight Industrial Designer could be used. Any combined system which is selected, whether it be the rental-basis of New England Telephone and Telegraph Company or a system manufactured by an independent firm, we believe the Emergency Call Box and its standard should be redesigned. This is not a major problem as the box with its supporting standard is purely an enclosure for the electronic components of the system. The box should be redesigned to present a clean, contemporary appearance, capable of being mounted on an independent standard, on the face of a building or on a lighting standard.

3.3.1 The Gamewell Company

This company is probably the oldest in the Fire Alarm business having supplied the first in the nation to the City of Boston. They also manufacture a Police Signal box which is mounted in some cases on the same standard as the Fire Alarm telegraph-type box. (Plate 3.4.1). This company is progressive and realizes that the American Telephone and Telegraph Company is cutting into their Fire Alarm business by the combined Emergency Telephone systems. Gamewell has indicated their willingness to work with the Authority on a modernized system for Police Signal boxes which could be used with the existing Fire Alarm telegraph-type box. If the Fire

Department would not approve an Emergency Telephone system which we recommend, we are sure that Gamewell would be willing to design and manufacture a combined box using telephone for the Police Department and telegraph-type alarm for the Fire Department. They have used a local Industrial Designer for some of their newer Fire Alarm boxes (such as their Century non-code Fire Alarm station shown on Plate 3.4.1.) The Gamewell Company states they have all the necessary components to improve the existing Police Signal system which could include a Citizen's emergency feature so that anyone could activate an emergency call to Police Headquarters by a pull lever. Our reaction to this feature is that false emergency calls to Police Headquarters would immediately increase. The findings by the City of Miami indicate that a pull lever system for fire alarms resulted in 63% false alarms while telephone calls from Emergency boxes reduced the false alarms to 5 to 6%.

3.3.2 Indianapolis Police Department

This department uses the combined Police & Fire Department Emergency Telephone system installed and maintained by the Indiana Bell Telephone Company. This system replaced a Gamewell system in 1955 and the Department reports that it works very satisfactorily.

3.3.3 Columbus Fire and Police Communications

The Police Department has replaced an old communication system and the Fire Department has replaced their telegraph-type alarm system by one manufactured by Automatic Electric, a division of General Telephone and Electronics.

3.3.4 Automatic Electric, a division of General Telephone & Electronics

This is an independent company that manufactures an Emergency Telephone system which can be purchased directly and would be eligible for Federal funds.

3.3.5 New York Police Department

New York uses telephone call boxes of the New York Telephone Company and a few boxes purchased from Graybar Electric Company. It is believed that the Graybar boxes are manufactured by Plaff & Kendall.

3.3.6 Seattle Police Department

Seattle uses Police signal boxes manufactured by Gamewell Company.

3.3.7 St. Louis Fire and Police Telegraph Section

St. Louis uses both fire and police boxes manufactured by the American Foundry and Manufacturing Co. of St. Louis.

3.3.8 Los Angeles Wire & Signal Division

Los Angeles in some cases mounts both the Police Signal Box and the Fire Alarm Box on a common standard. They are also using a combined Emergency Telephone System manufactured by Phone Alarm, a division of Switching Systems, Inc.

3.3.9 Phone Alarm, a division of Switching Systems, Inc.

This is another independent manufacturer who manufactures an Emergency Telephone system which would be eligible for Federal funds.

3.3.10 New Orleans Police Department

This is another city that is converting to a combined Emergency Telephone system to handle both Police and Fire calls.

3.3.11 San Diego Police Department

This department uses no Police Signal boxes as all communications are handled by two-way radio telephone in their Police cruisers.

3.3.12 Atlanta Police Department

This police department uses a telephone box installed and maintained by the Southern Bell Telephone & Telegraph Company. The Fire Department of this city uses the telegraph-type Fire Alarm

box of Gamewell Company. Here is a case where a combined Emergency Telephone system is not used, each Department having an independent system.

3.3.13 Kansas City Police Department

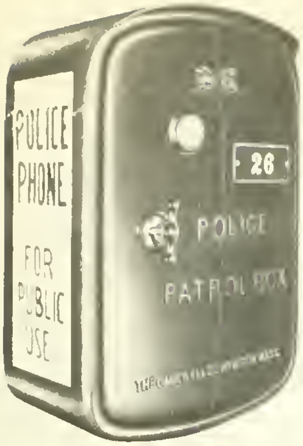
The Kansas City Police Department have not used Police Signal boxes for a number of years relying on two-way radio telephones in their Police cruisers.

3.3.14 Chicago Police Department

This department uses telephone boxes designed by their Fire Alarm and Police Signal Unit of the Bureau of Electricity, City of Chicago. These are bid items and usually supplied by Leitelt Brothers Company, 7731 South Chicago Avenue, Chicago, Illinois.

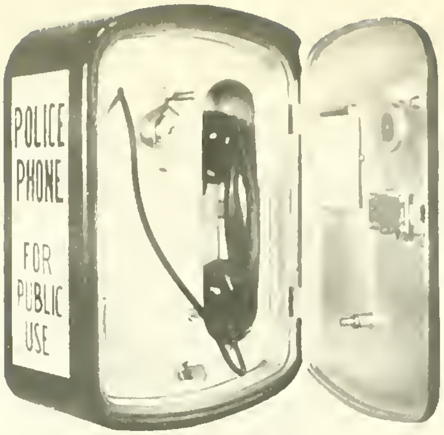
3.3.15 Omaha Police Division

Omaha uses an Emergency Telephone system for Police calls and Fire alarms which is installed and maintained by the Northwestern Bell Telephone Company.



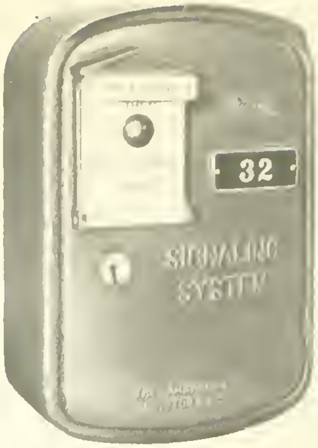
Police Box with Public Telephone
Cat. No. 1204

With this design every box in the system is a public telephone station from which citizens may call the police station.



Police Box, Door Open Exposing Telephone

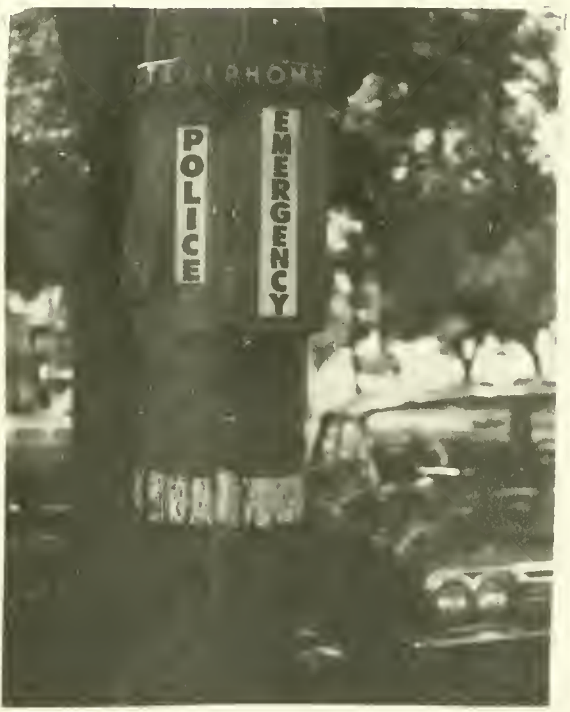
Opening the outer door by means of the handle exposes the police telephone.



Police Box with Citizens' Emergency Feature
Cat. No. 1205

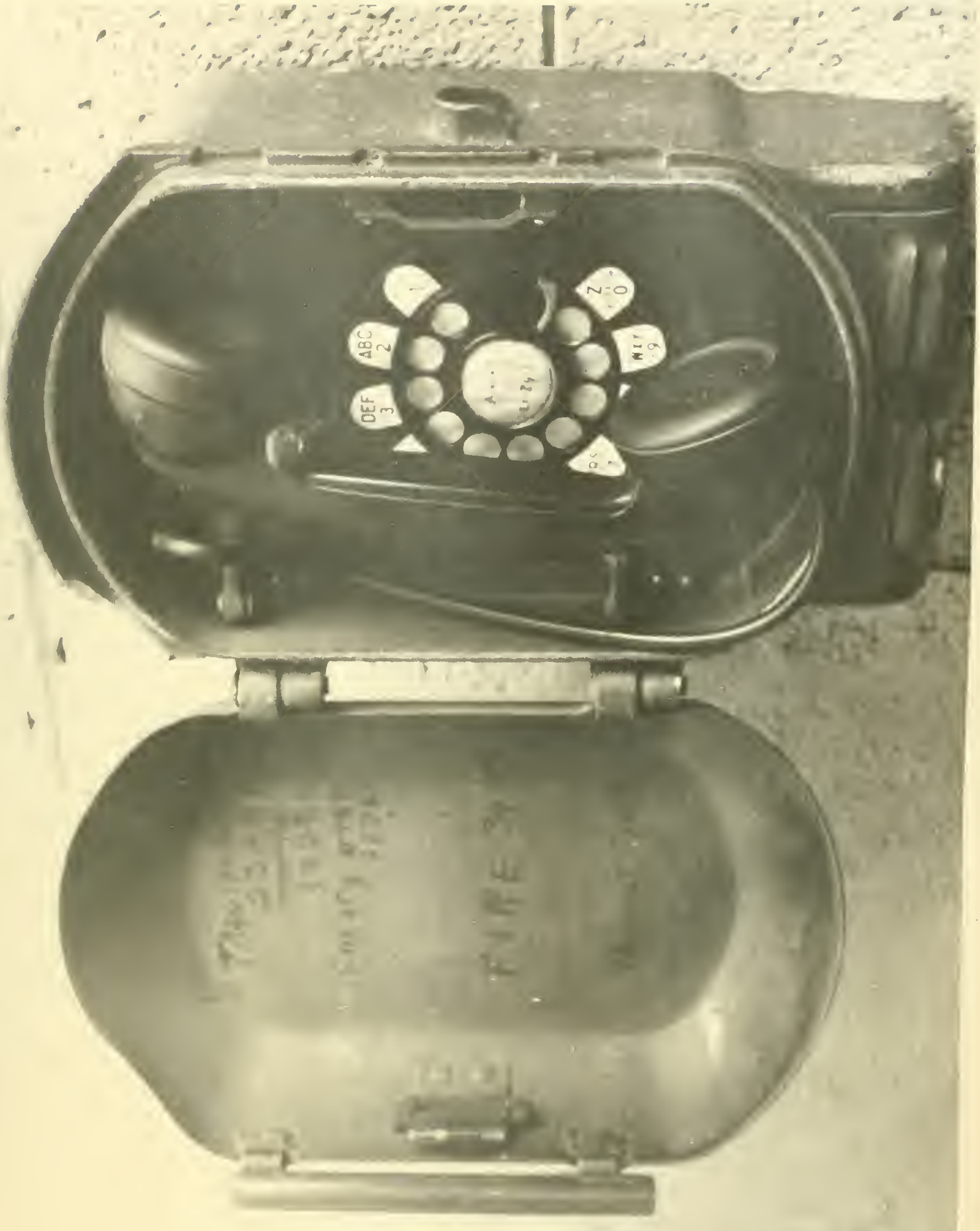
Pulling down the guard panel and then the pull lever sends the Citizens' Emergency Call. Box can be furnished with suitable signs.

THE GAMEWELL COMPANY



NEW ORLEANS POLICE DEPARTMENT

PLATE 3.3.1



ATLANTA, GEORGIA

SOUTHERN BELL TELEPHONE COMPANY

PLATE 3.3.2

3.4 FIRE ALARM BOXES AND STANDARDS

Boston installed a Gamewell Fire Alarm System in 1855 and St. Louis in 1858 the first two in the nation. Our Fire Department has always had an excellent reputation and should continue to be served by the best and latest equipment.

Many cities have replaced the telegraph type fire alarm system witn an Emergency Telephone System which can be used for Fire, Police and Emergency Service. Such a system is manufactured by several companies as well as the American Telephone and Telegraph Company. Many cities are replacing the typical fire alarm box with a telephone system in planned steps using both systems until the conversion to telephone is complete city wide.

3.4.1 Miami Division of Communications

The City of Miami supplied us with an excellent report on their new Fire Alarm system which also is used for Emergency, Police and Communications to the different departments of the City. Mr. Ben Demby, Superintendent of the Division of Communications, prepared this report and certain excerpts are as follows.

The new system has been approved by the National Board of Fire Underwriters and since its installation two fire insurance reductions have been obtained on City properties. An Underwriter's Engineer stated "the City of Miami's operation is one of the most efficiently run Emergency Reporting systems I have seen and meets all the Underwriters requirements."

A survey was made covering the period from January 1, 1950 to July 22, 1952 and an investigation was made of 9,099 alarms received at the Alarm Office during this period. The results of this investigation are shown on Plates 3.4.1, 3.4.2 and 3.4.3.

It should be noted that of the 267 false alarms received (63%) over the convential fire alarm box system 1,216 pieces of fire apparatus were dispatched to cover these false alarms at a considerable cost to the city besides the danger and liability. During the survey period 8,055 telephone alarms were received of which 254 or 3.1% were false as against the 63% false alarms received over the Box System.

The Emergency Telephone System was put into operation in Miami on July 27, 1953 and up to and including December 31, 1961 the following has resulted:

Number of days	3,079
Total number of Emergency Telephone Alarms	1,421
False Alarms	75
Percentage of False Alarms	5.3%
Fire Equipment Dispatched due to false alarms	271

While only 1,421 fire alarms were reported over the Emergency Telephone System an average of 167,132 calls per year are handled by the system. This indicates its flexibility in reporting complaints to the Police Department, requests for ambulances or wrecker and for City employees to call their office when on outside assignment. The citizens

of Miami have accepted these Emergency Telephone Boxes as the best medium of receiving immediate assistance from Fire or Police Departments.

When an Emergency Telephone call comes in to the switchboard, it is recorded on a paper-tape with the telephone number, the date, time received, and time answered, thereby maintaining a permanent record of the call.

The City of Miami covers 34.19 square miles in an irregular pattern. The cost of the Emergency Telephone System is based on telephone mileage and the average cost per box runs approximately $15.38 per month. This is on a straight rental basis and there are no maintenance or repair costs to the City of Miami, as all these services are provided by the Southern Bell Telephone Company.

In summary the City of Miami reports for 300 days operation:

Type of Alarm	Fire Alarm Box	Emergency Telephone Box
Building Fires	13	28
Other Fires	11	80
False Alarms	107	4
Equipment Dispatched	503	14

The equipment installed and maintained by the Southern Bell Telephone Company is similar to that shown on Plate 3.4.4 except the Miami box is lettered FIRE, POLICE, EMERGENCY and is in two colors of red and green. On Plate 3.4.5 there are listed ten advantages which are claimed for this system.

The Miami system is on a rental basis and would not be eligible for Federal Redevelopment funds. Similar systems are manufactured by independent companies which can be purchased and installed by a city and thus be eligible for Redevelopment funds.

3.4.2 Los Angeles Wire & Signal Division

The City of Los Angeles uses the Gamewell 3-fold box, Catalogue number 7000 and the Phone Alarm. The latter is manufactured by Switching Systems, Inc., 13901 Saticoy Street, Van Nuys, California. This is a Telephone system similar to the Miami system which can be purchased directly from the manufacturer and eligible for Federal Redevelopment funds. The cost of this multi-purpose emergency box is comparable to that of the single purpose telegraph fire alarm box.

3.4.3 The Gamewell Company

This company is probably the oldest and best known in the fire alarm field. The original Boston system installed in 1855 was produced by Gamewell. They have not gone into a complete telephone emergency system although they do manufacture police call boxes. Plate 3.4.7 shows a telegraph type fire alarm box mounted on the same standard with a policy telephone call box. It seems that these two systems could be combined as has been done in numerous cities.

3.4.4 B & B Engineering Corporation

This company also manufactures a Fire, Police and Emergency Telephone

call system similar to the ones in use in Miami and Los Angeles (Plate 3.4.8)

3.4.5 Omaha Fire & Police Division

This city has converted to a Fire and Police signal system which is installed and maintained by the Northwestern Bell Telephone Company on a rental basis (Plates 3.4.10 and 3.4.11).

3.4.6 Sacramento Fire Department

The system used is similar to the Gamewell Telegraph Fire Alarm and is manufactured by W. A. Benjamin Electric Company of Los Angeles. Two views of this equipment are shown on Plates 3.4.11 and 3.4.12.

3.4.7 St. Louis Fire Department

St. Louis uses the telegraph type fire alarm system and their boxes and standards are manufactured by the American Foundry & Manufacturing Company of St. Louis (Plate 3.4.13).

3.4.8 Atlanta & Ft. Lauderdale Fire Department

Both of these cities use the Gamewell system for their fire alarms.

3.4.9 Columbus Fire & Police Department

This city uses a combined fire and police emergency system manufactured by General Telephone and Electronics. They report that the system is highly satisfactory (Plate 3.4.15).

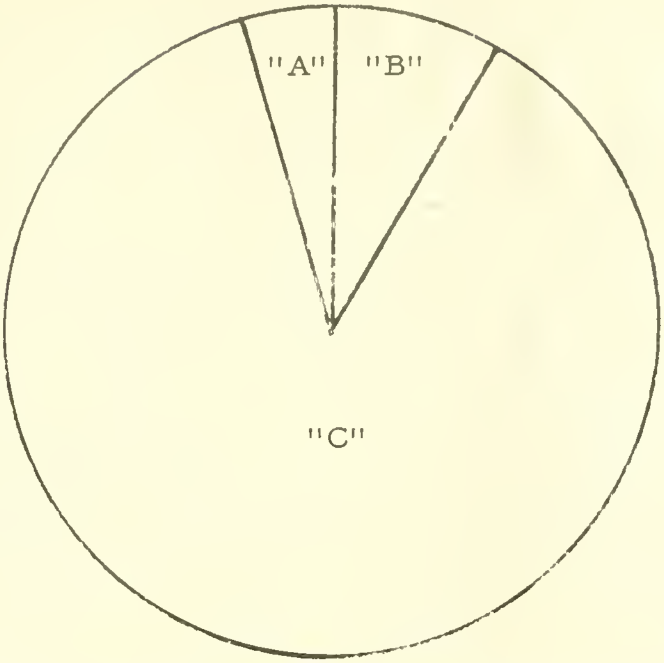
3.4.10 Indiana Fire & Police Departments

This city has converted to a combined system which is installed and maintained by the Indiana Bell Telephone Company on a rental basis (Plate 3.4.15).

3.4.11 Seattle Fire Department

Uses Gamewell (Cottage Type) Fire Alarm boxes mounted on lighting standards, utility poles or a section of 3-inch steel pipe with an attachment plate welded in place on one end to which the box is attached.

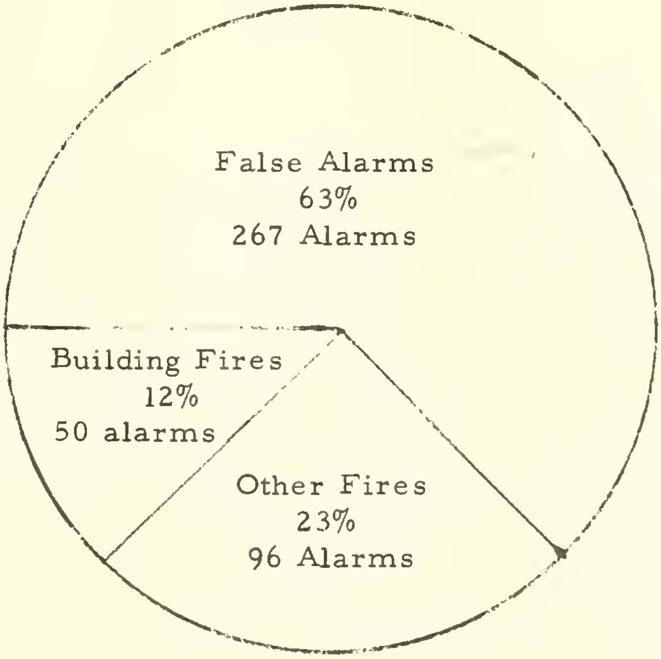
RELATIONSHIP OF TOTAL ALARMS RECEIVED (9,099)*



*Note - Survey made on 308 Fire Alarm Boxes

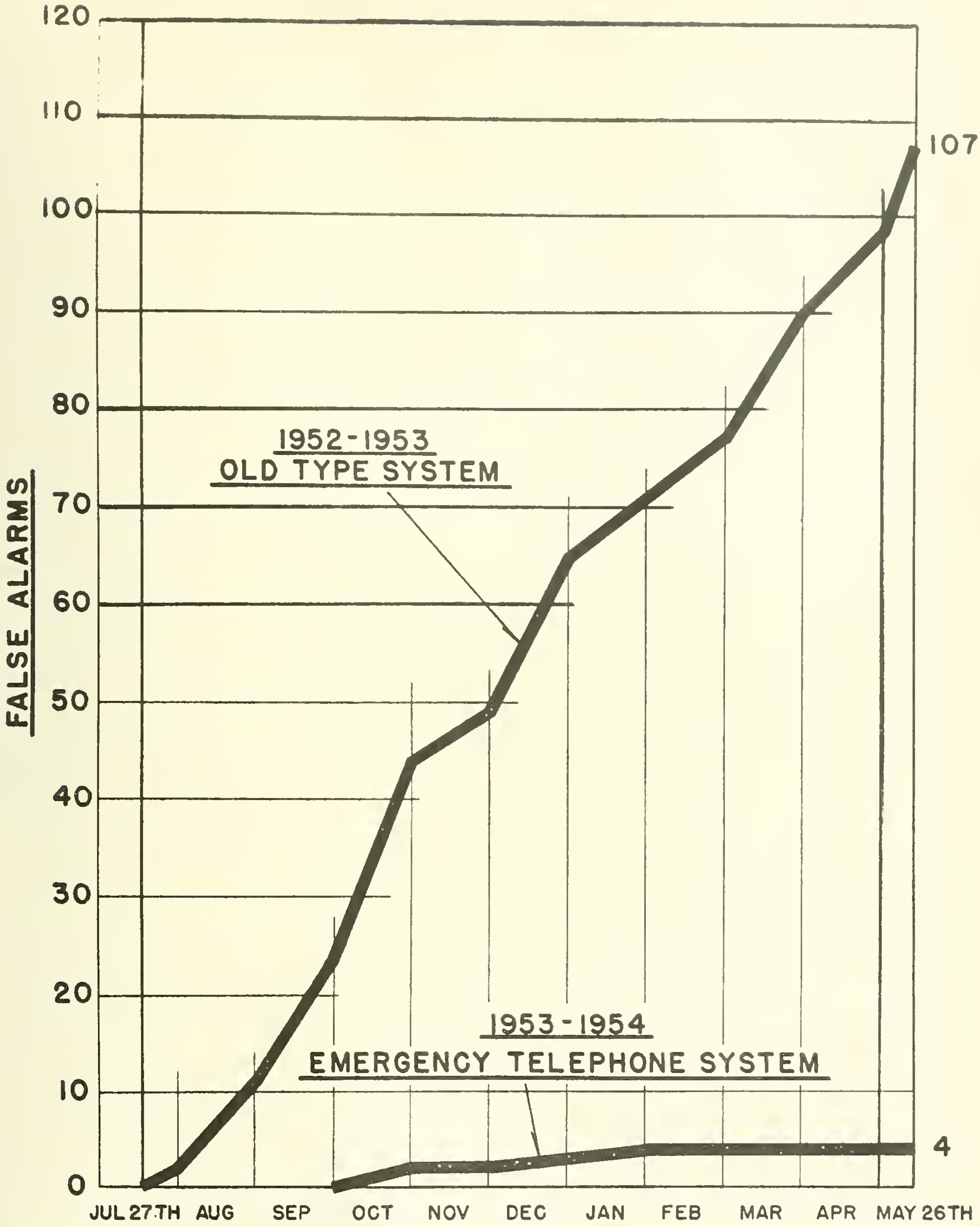
A -	Fire Box Alarms	-	4.5%	-	413 Alarms
B -	Still Alarms	-	7.0%	-	631 Alarms
C -	Telephone Alarms	-	88.5%	-	8,055 Alarms

TYPES OF ALARMS RECEIVED OVER FIRE ALARM BOX SYSTEM



CITY OF MIAMI FLORIDA

PLATE 3.4.1

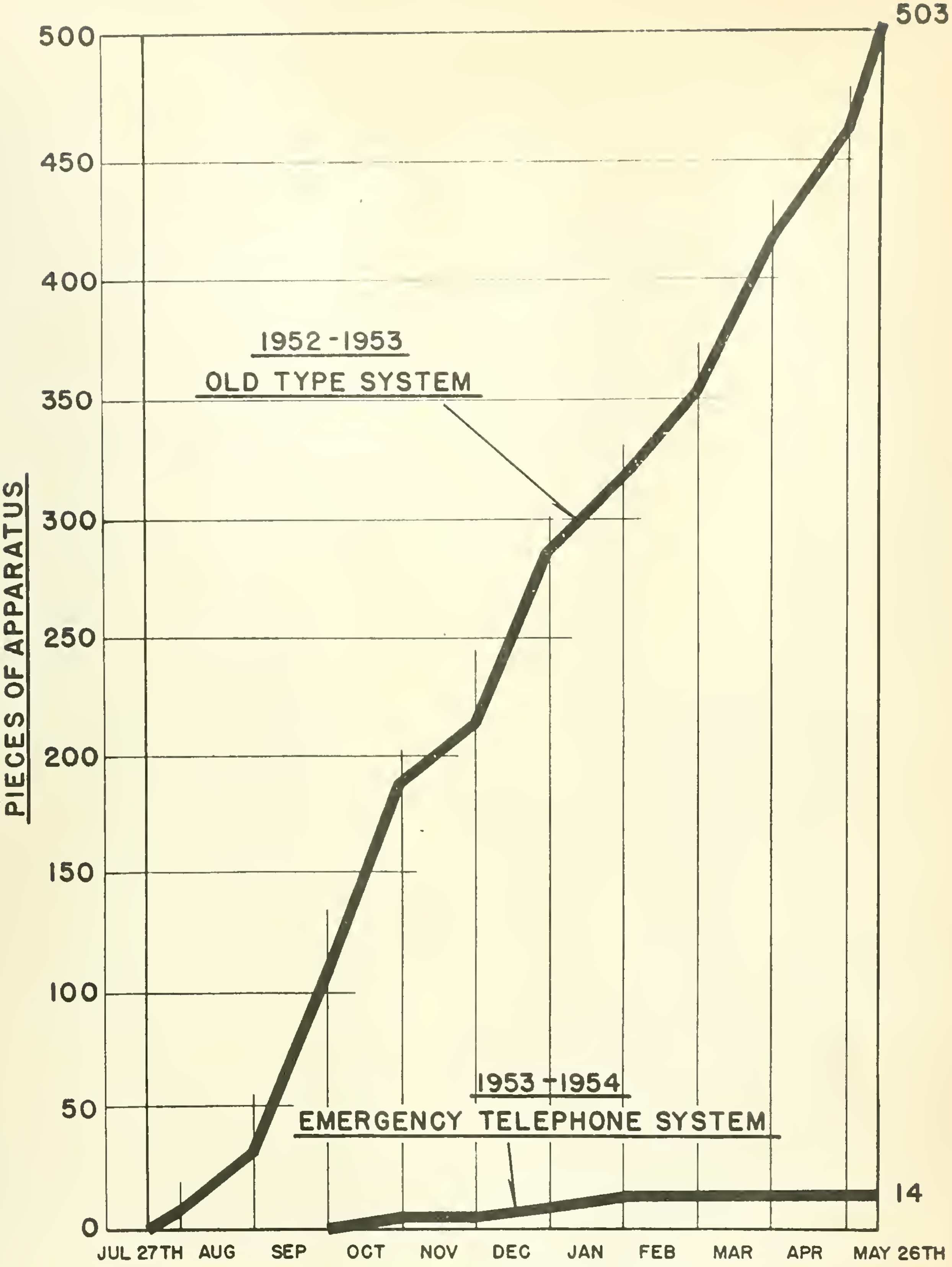


NUMBER OF FALSE ALARMS

300 DAY COMPARISON BETWEEN OLD & NEW TYPE SYSTEMS

CITY OF MIAMI, FLORIDA
DIVISION OF COMMUNICATIONS
BEN DEMBY-SUPERINTENDENT

PLATE 3.4.2



FIRE APPARATUS RUNS FOR FALSE ALARMS

300 DAY COMPARISON BETWEEN OLD & NEW TYPE SYSTEMS

CITY OF MIAMI, FLORIDA
DIVISION OF COMMUNICATIONS
BEN DEMBY-SUPERINTENDENT

PLATE 3.4.3

MIAMI, FLORIDA
EMERGENCY, FIRE AND POLICE
SOUTHERN BELL TELEPHONE COMPANY

PLATE 3.4.4

1. **SAVES TIME.** Because the person reporting the fire or other emergency can give the exact location, the fire control center or police can dispatch equipment directly to the scene of need. Delays—even short ones—can cost lives and property.

2. **REDUCES FALSE ALARMS.** Because a telephone is used to report emergencies, false alarms are discouraged. In cities where EMERGENCY REPORTING TELEPHONE SYSTEM service has been installed, false alarms have dropped significantly.

3. **ELIMINATES MANPOWER AND EQUIPMENT WASTE.** Because the caller describes the nature and extent of the trouble, the dispatcher can better decide what and how much equipment should be sent. Avoids dispatching duplicate equipment when a number of people report the same emergency.

4. **ASSURES CONTINUING OPERATION.** Because circuits are continuously self-tested, audible and visual alarms immediately notify the fire control center of any service interruption. Maintenance personnel of your Telephone Company are quickly dispatched to trace and repair the trouble.

5. **IMPROVES ALARM SYSTEM.** One central emergency alarm headquarters provides more effective reporting of all emergencies, and more economical use of men and equipment.

6. **PROVIDES PRINTED RECORDS.** Every emergency call is permanently recorded on automatic equipment that prints the time, date and call box number. In addition, voice recording is available.

7. **DOUBLES AS POLICE CALL-IN BOX.** Each telephone box can be equipped with an inconspicuously located pushbutton mounted just above the hand set. By pushing this button, then lifting the phone, calls from the policeman on the beat can be routed directly to police headquarters, bypassing fire switchboard entirely.

8. **ADAPTS TO CITY'S NEEDS.** The flexibility of this Bell System service allows you to spot your telephones where you need them. Reporting stations and dispatching circuits can be rearranged on short notice to meet the changing demands of today's modern cities.

9. **ELIMINATES BIG INVESTMENT AND COSTLY UPKEEP.** There is no huge capital investment for your city with the Bell System's EMERGENCY REPORTING TELEPHONE SYSTEM. Regular monthly service charge covers repairs and maintenance.

10. **PROVIDES SUPPLEMENTARY SERVICES TAILORED TO YOUR NEEDS.** You can supplement the basic service with teletypewriter and special electric circuits to operate loudspeakers, sound alarms, turn on lights, record messages, or perform other useful services.

MIAMI, FLORIDA
EMERGENCY, FIRE AND POLICE
SOUTHERN BELL TELEPHONE COMPANY

PLATE 3.4.5

CONFORMS TO THE HIGHEST DEGREE WITH THE NATIONAL BOARD OF FIRE UNDERWRITERS' REQUIREMENTS FOR MUNICIPAL FIRE ALARM SYSTEMS.

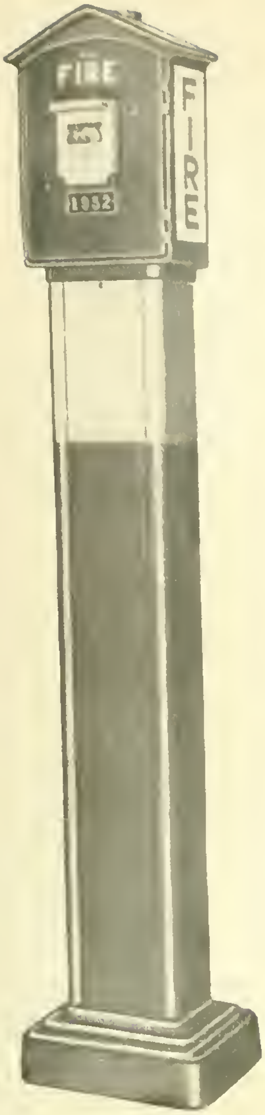
- The municipality owns the system and has full control at all times.
- Strikes or sabotage can have no effect on continuity of service.
- These emergency circuits strung throughout the city are separate from existing telephone systems, thereby providing a distinct and separate channel of communications.
- The PHONALARM Emergency Box circuit may embrace up to 60 boxes per single wire loop.
- The location of the box is self-identifying by means of its coding mechanism.
- The system permits the use of voice for detailing the nature and location of a fire, accident, robbery, or other emergency.
- Broken lines can't cause transmission failure—either voice or telegraphic signal.
- Each box is supervised at the central control by means of constant current flow.
- The cost of this multi-purpose emergency box is comparable to that of the single-purpose telegraph fire alarm box.
- Life of the PHONALARM box compares in all respects to the telegraph single-purpose fire alarm systems.
- Porcelain exteriors require no maintenance.
- It is not necessary to re-wind the box after use.
- With slight modifications at headquarters PHONALARM Boxes can be incorporated within existing fire alarm telegraph systems.

PhonAlarm TRADE MARK
PATENT 2.851.528

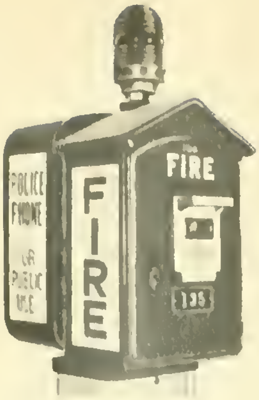
DIVISION OF **SWITCHING SYSTEMS, INC.** 7578 SAN FERNANDO ROAD, SUN VALLEY, CALIF.
TRiangle 7-5389 · TRiangle 7-9775

LOS ANGELES, CALIFORNIA

PLATE 3.4.6



PC-1 Pedestal With Fire Alarm Box in Place



PC-2 Pedestal Showing Fire Alarm and Police Box With Indicating Light

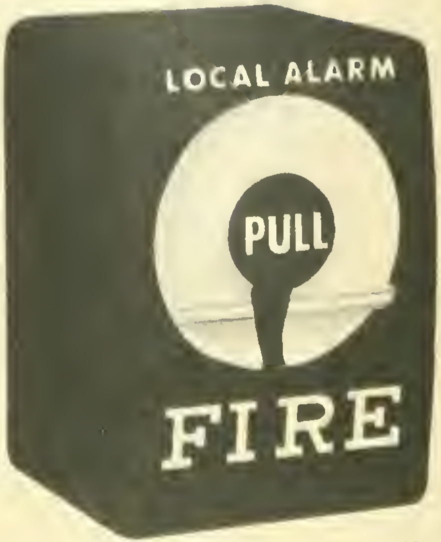


Photo 8090

Surface mounting Century non-code station with die-cast backbox. Breakglass rod shown in place. Use of glass rod is optional.

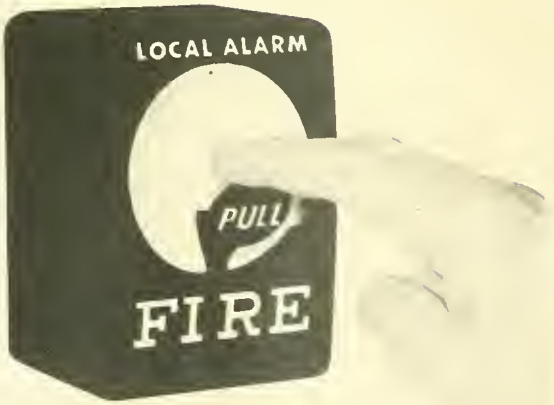


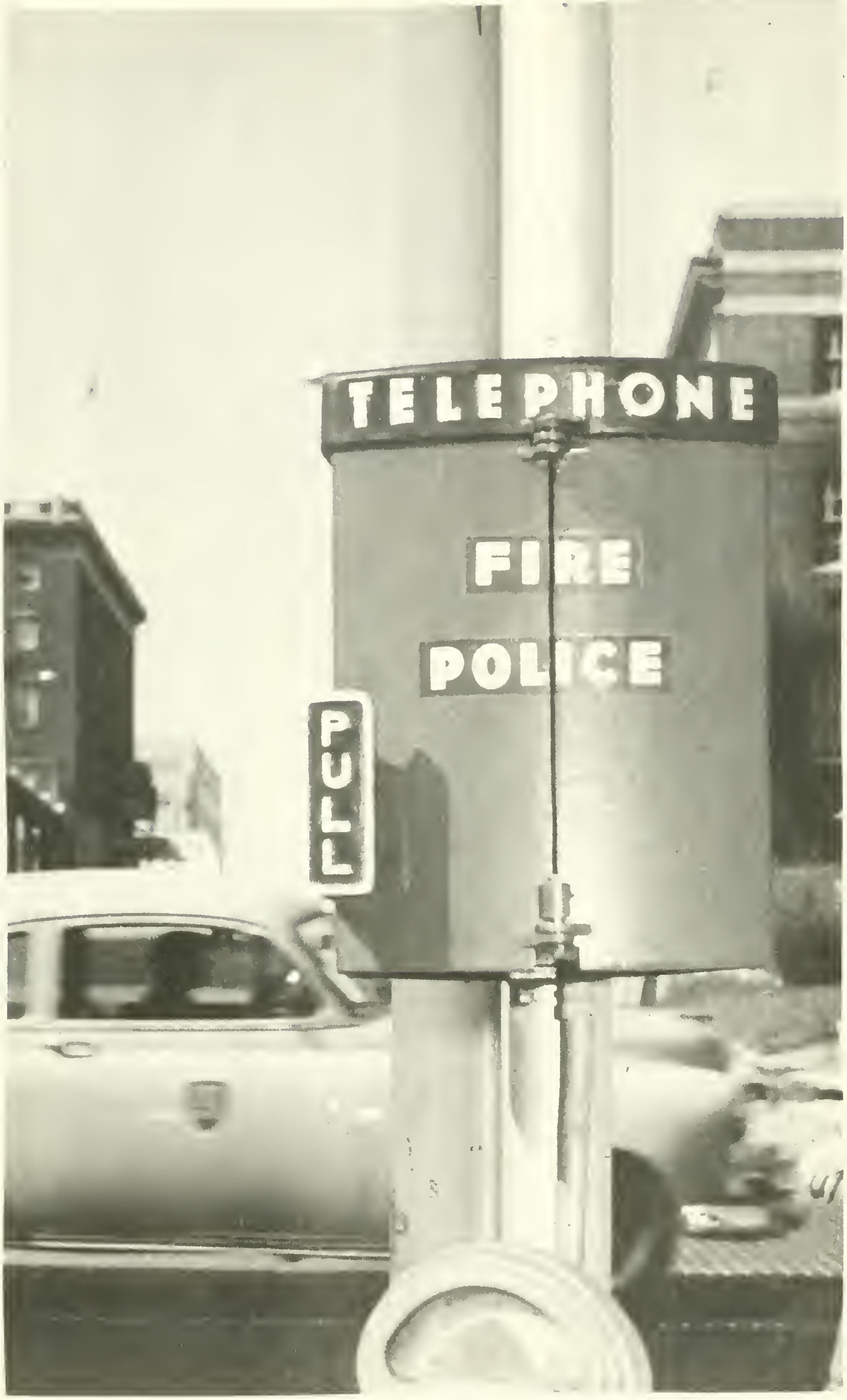
Photo 8094

Operation of station is single action, positive and fool-proof. Pulling lever forward transmits alarm and locks in "out" position until reset by authorized person. Station can be used with or without breakglass feature. Photo shows box operated without breakglass rod.

The Firephone* Automatic Emergency Call Box provides all of the features demanded by the public.

Firephone* commands respect and symbolizes protection.

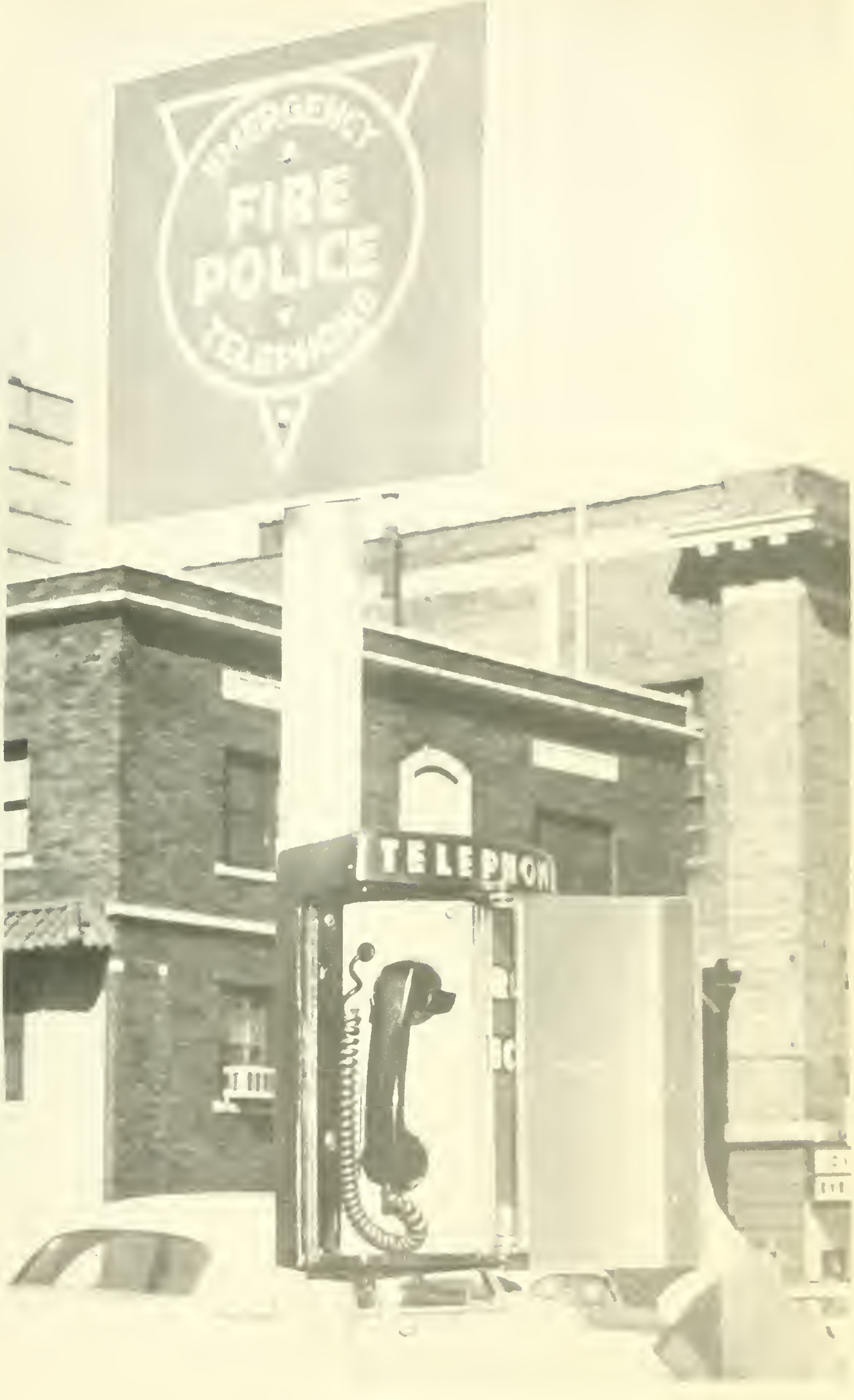
Furnished complete with pedestal and flashing light.



OMAHA, NEBRASKA

NORTHWESTERN BELL TELEPHONE COMPANY

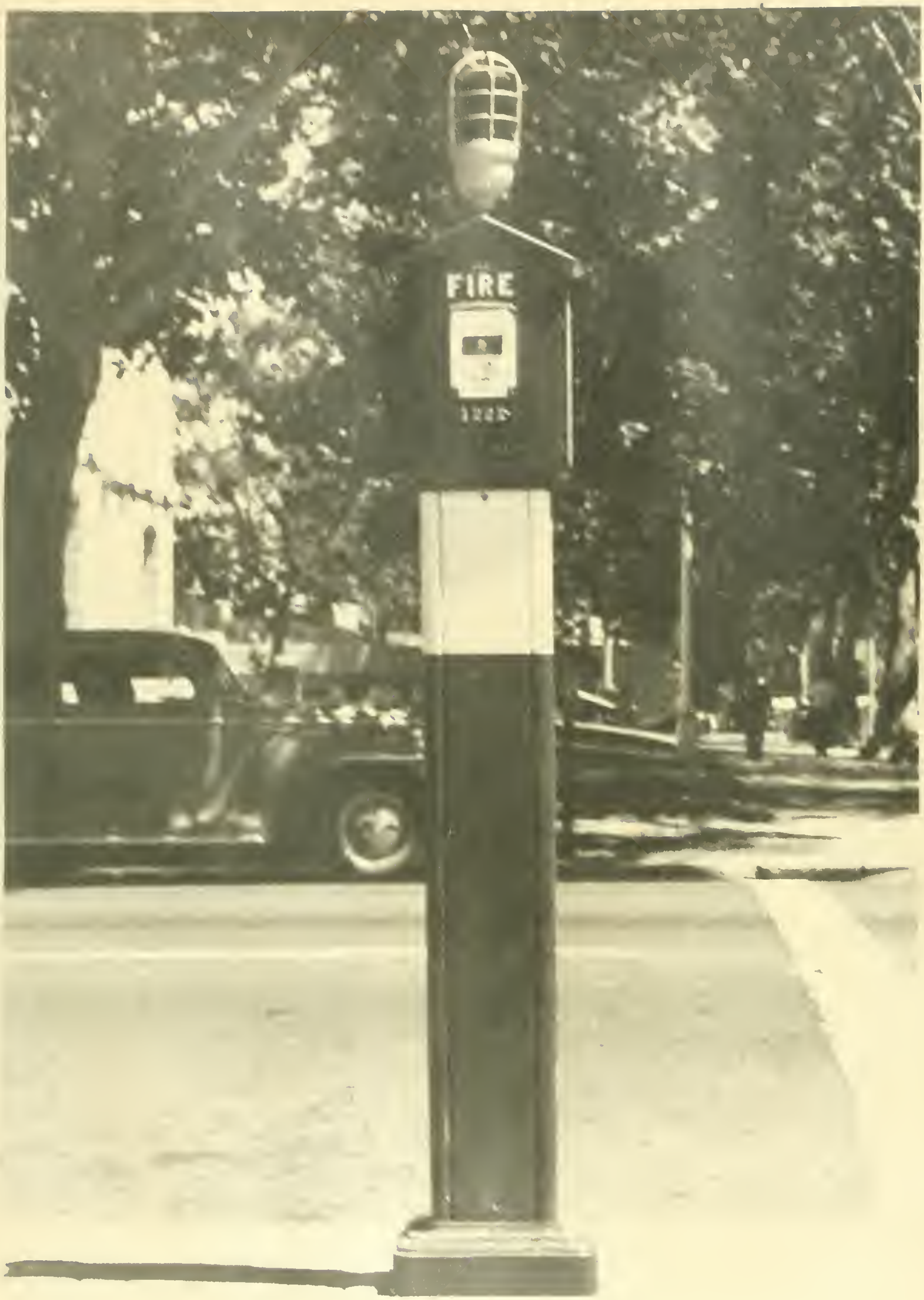
PLATE 3.4.9



OMAHA, NEBRASKA

NORTHWESTERN BELL TELEPHONE COMPANY

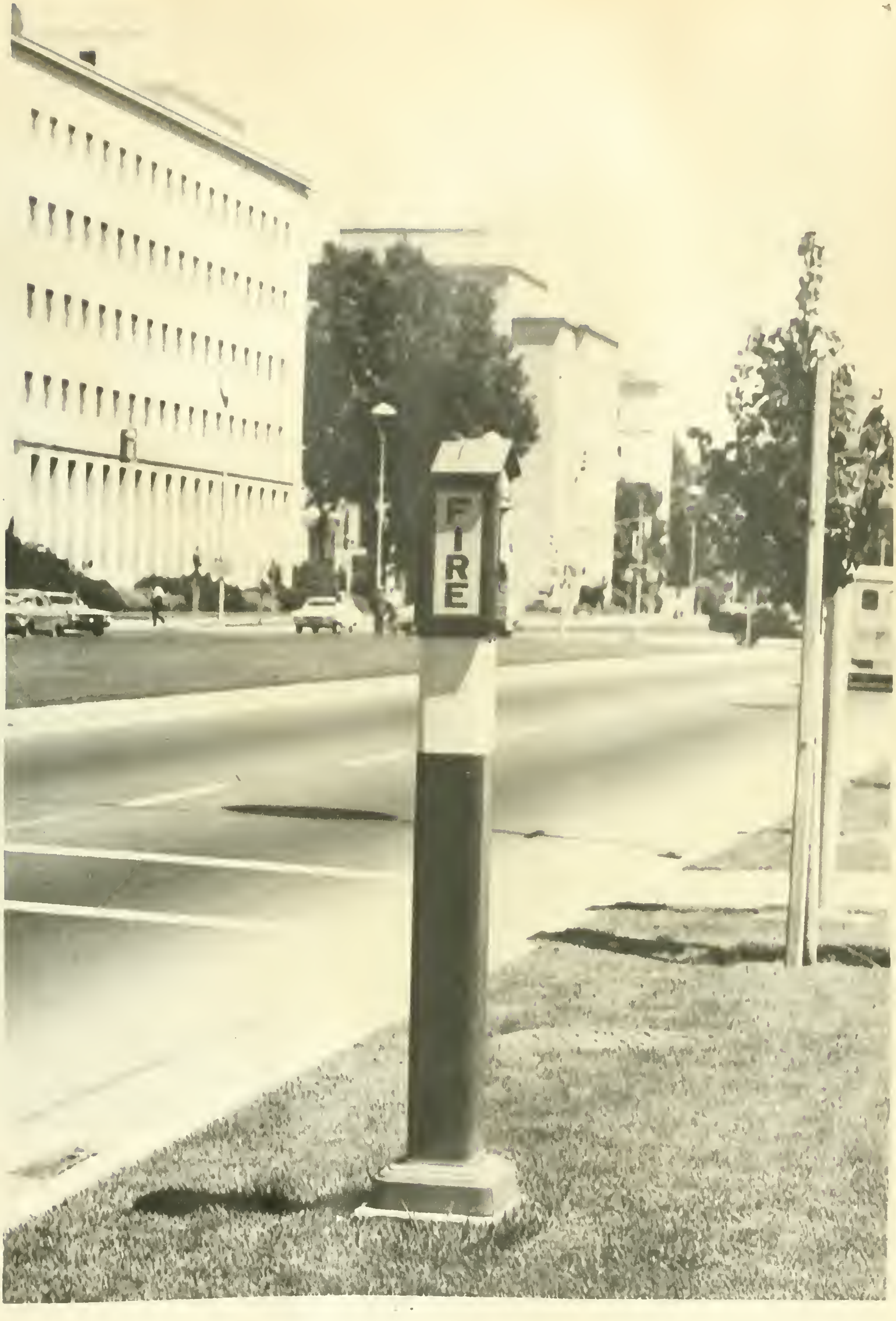
PLATE [illegible]



SACRAMENTO, CALIFORNIA

W. A. BENJAMIN ELECTRIC COMPANY

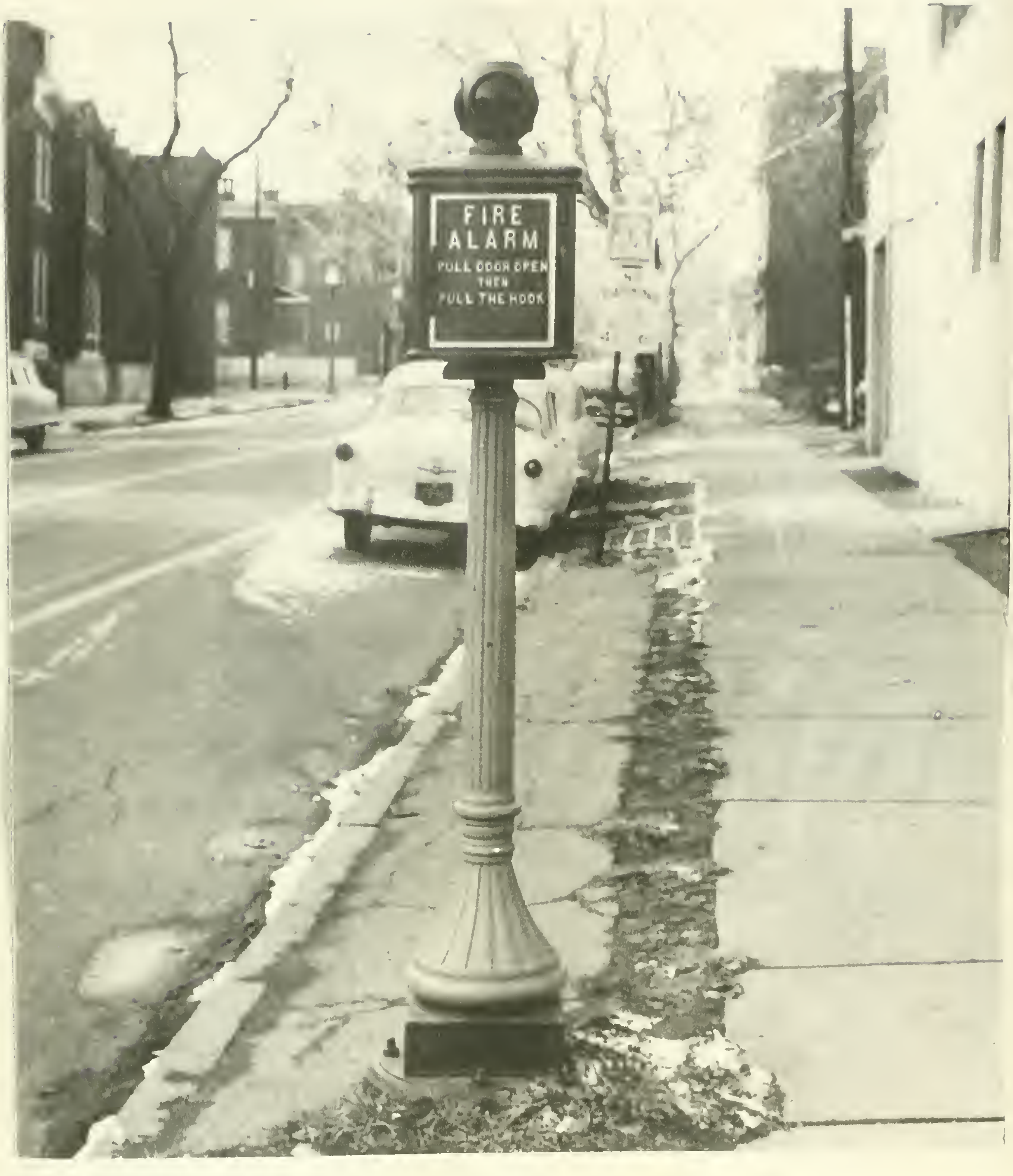
PLATE 3.4.11



SACRAMENTO, CALIFORNIA

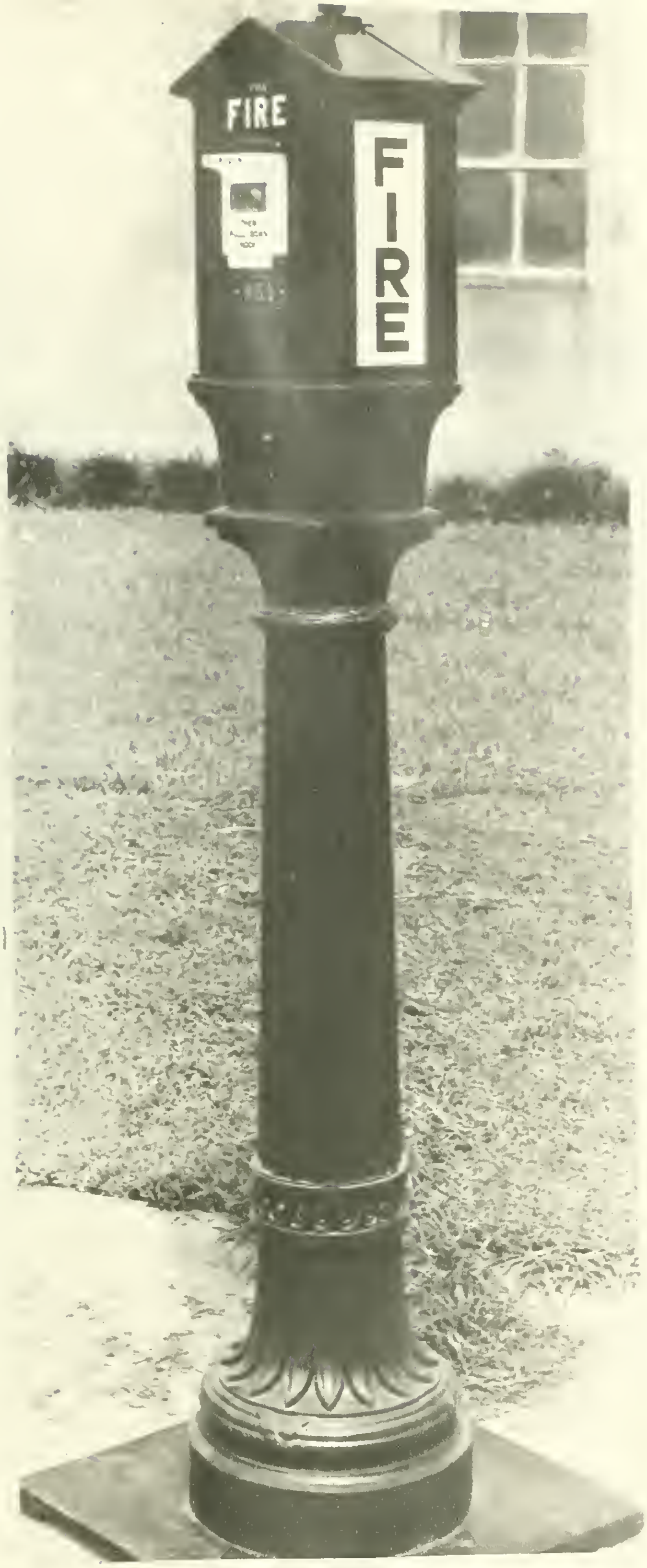
W. A. BENJAMIN ELECTRIC COMPANY

PLATE 3.4. 12

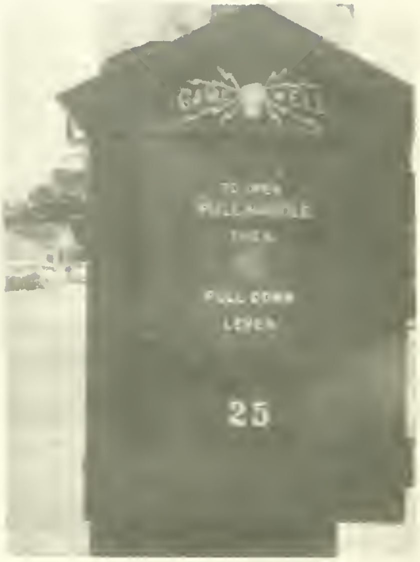


ST. LOUIS, MISSOURI
AMERICAN FOUNDRY & MANUFACTURING COMPANY

PLATE 3.4.13



ATLANTA, GEORGIA
GAMEWELL COMPANY



FT. LAUDERDALE, FLORIDA
GAMEWELL COMPANY

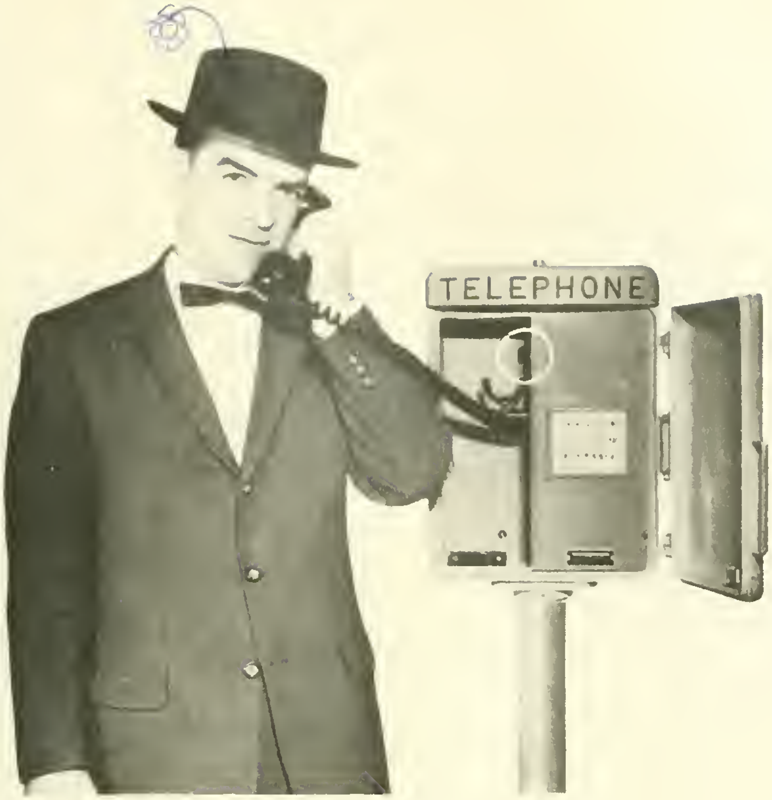
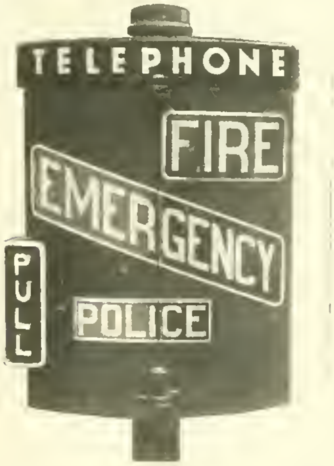


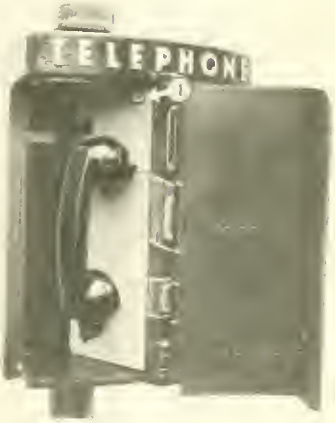
Figure 2—Any person may make a "Fire" call, by simply lifting the handset. To make a "Police" call, however, it is necessary also to press the "Police" push button (in circle), the use of which is known to authorized persons only.

COLUMBUS POLICE FIRE BOX

GENERAL TELEPHONE & ELECTRONICS



Box Closed



Box Open

INDIANAPOLIS, INDIANA

INDIANA BELL TELEPHONE COMPANY

3.5 STREET AND TRAFFIC SIGNS

Street signs are manufactured by numerous companies and also by the Traffic and Parking Commission in their own sign shop. Traffic signs are now standardized by the National Joint Committee on Uniform Traffic Control Devices and most cities comply with these accepted standards.

To be effective, both street signs and traffic signs should possess the following qualities:

1. Be effective day and night
2. Be effective in all weather
3. Be effective at critical angles
4. Render long effective lift to cut maintenance problems to a minimum
5. Be capable of easy maintenance when required
6. Have a surface which is self-cleaning
7. Be economical, per day of useful life

For street signs it is recommended that abbreviations (NO PERIODS) be used except for a street where the name is all that is necessary such as STATE not STATE ST. The other abbreviations which may be necessary should conform to the

following:

Avenue	AV	Place	PL
Boulevard	BLVD	Plaza	PLZ
Court	CT	Road	RD
Drive	DR	Square	SQ
Highway	HWY	Terrace	TER
Lane	LANE	Trail	TR
Parkway	PKWY	Way	WAY

In that numerous people use the streets of Boston and the tourist trade is of great importance to the City, EVERY street or avenue should be clearly marked at each intersection. Native Bostonians and people in the Greater Boston area are well acquainted with the major streets and avenues which in many cases are not marked. This we believe should be corrected in the Redevelopment Program Areas. Whether it be a major or minor street, both should be clearly marked at each intersection.

We also recommend that reflective street signs be used. Brilliant street name signs take all the guesswork out of finding streets at night. Reflecting headlight beams, such signs clearly deliver their message in all weather, at all angles - well in advance of the intersection.

Reflective signs are truly a service to the community. Motorists do not have to search, hesitate or turn suddenly without

warning where such are used. Vital minutes are saved by police, firemen, doctors and others on night time emergency calls.

3.5.1 3M Company

This company supplies technical assistance as well as reflective and non-reflective sheeting and pre-screened traffic sign faces. They can supply a number of color combinations such as green with white legend, green with silver legend, blue with silver legend, yellow with black legend, and silver with black legend.

A saving over manufactured signs is effected by the Traffic and Parking Commission doing their street and traffic signs in their own shop.

3.5.2 Municipal Street Sign Co., Inc.

This 40 year old company manufactures a large number of street and traffic signs. A number of their street signs are illustrated on Plates 3.5.1 through 3.5.3.

3.5.3 Lyle Signs, Inc.

This company manufactures street and traffic signs either embossed or silk-screen process.

3.5.4 Prismo Safety Corporation

This company specializes more in traffic and highway signs than in street signs.

3.5.5 Flexible Safety Zoning Co.

This company has a complete line of special safety devices, such as "Rail Steel" sign posts; Flex-O-Guides of synthetic rubber, plastic coated rubber or polyethylene; epoxy adhesives; safety paints; vinyl glo flags; glo vests and jackets; safety glo signs; barricades; portable traffic warning beacons; barricade lights; and traffic signs.

3.5.6 Grimm Stamp and Badge Co.

This company manufactures a complete line of street and traffic signs, with the necessary street name brackets of one piece aluminum.

3.5.7 Gopher Stamp & Die Co.

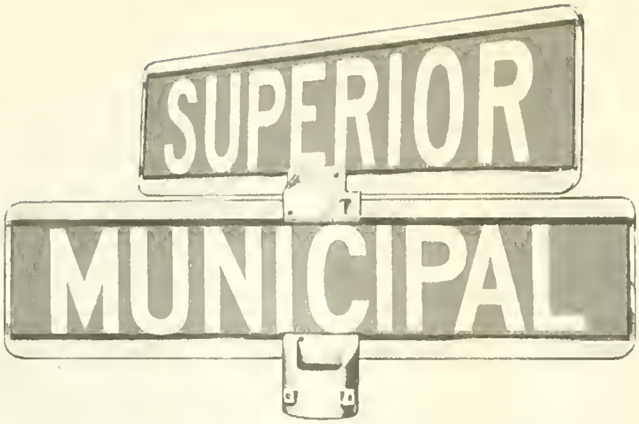
This company manufactures a complete line of street and traffic signs.

3.5.8 Miro-Flex Company, Inc.

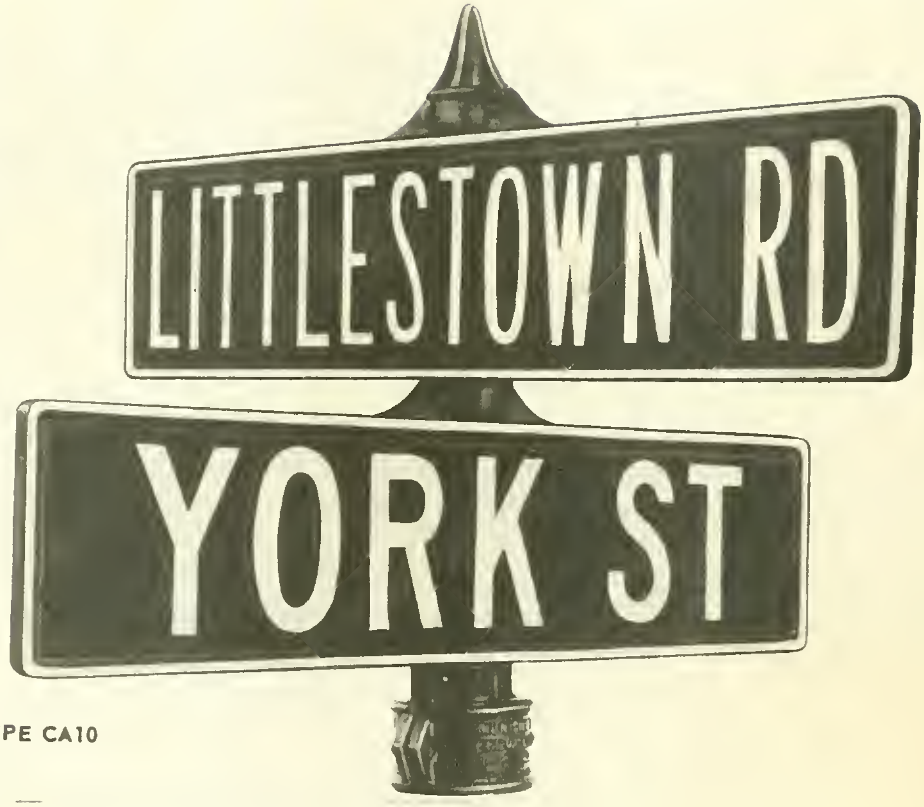
This company manufactures a complete line of street and traffic signs.

3.5.9 Independent Metal Strap Co., Inc.

This company manufactures stainless steel or galvanized strapping for the mounting of signs, signal boxes, etc., on posts. This can be purchased in a kit which includes all the necessary tools and equipment required.

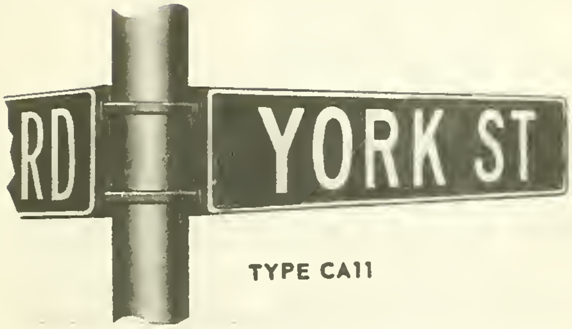


TYPE EA 15
EXTRUDED ALUMINUM-REFLECTIVE



TYPE CA10

CAST ALUMINUM REFLECTIVE

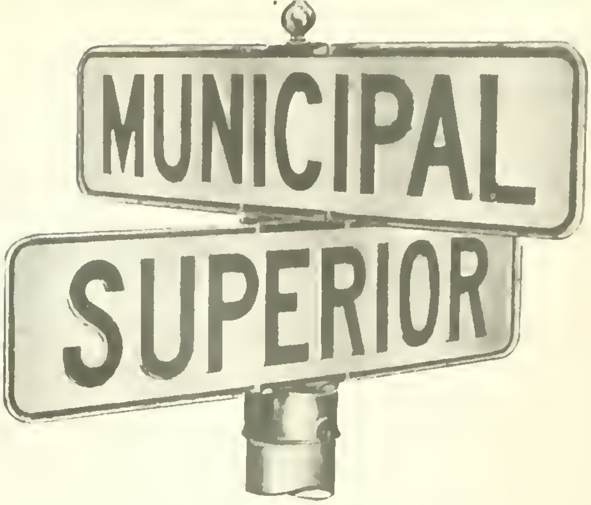


MUNICIPAL STREET SIGN CO., INC.

TYPE CA11

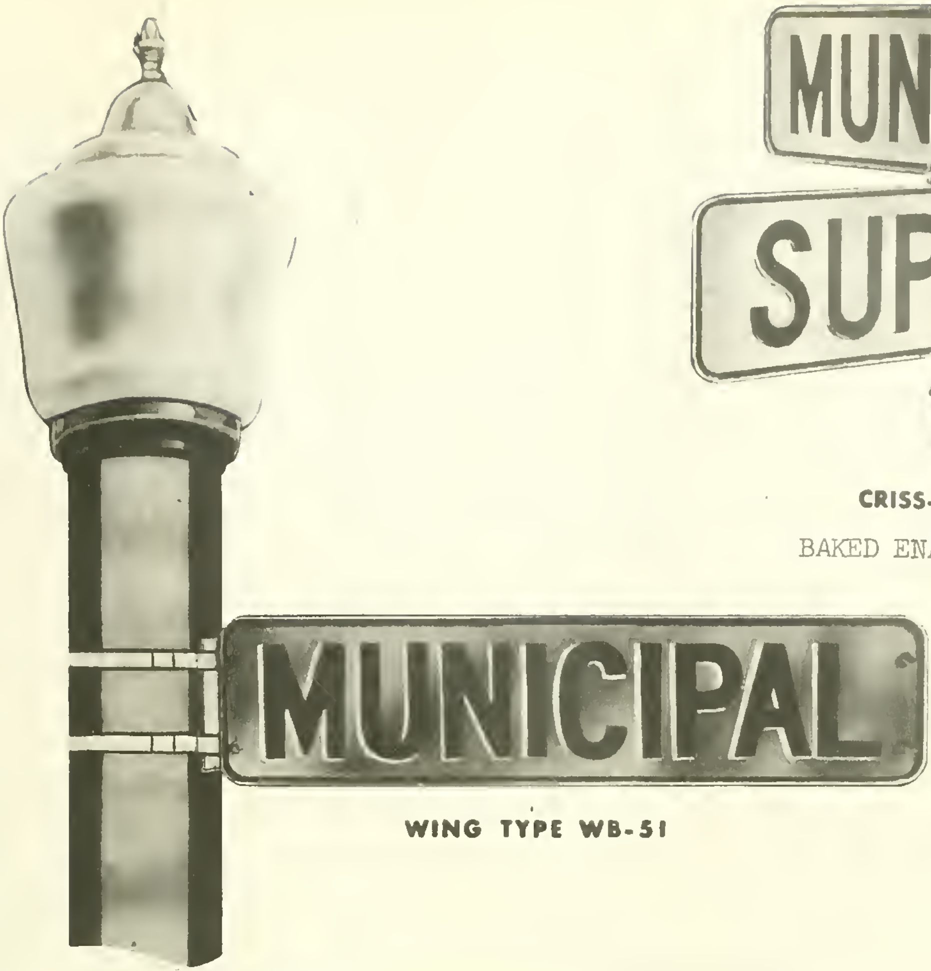
CAST ALUMINUM REFLECTIVE

PLATE 3.5.1



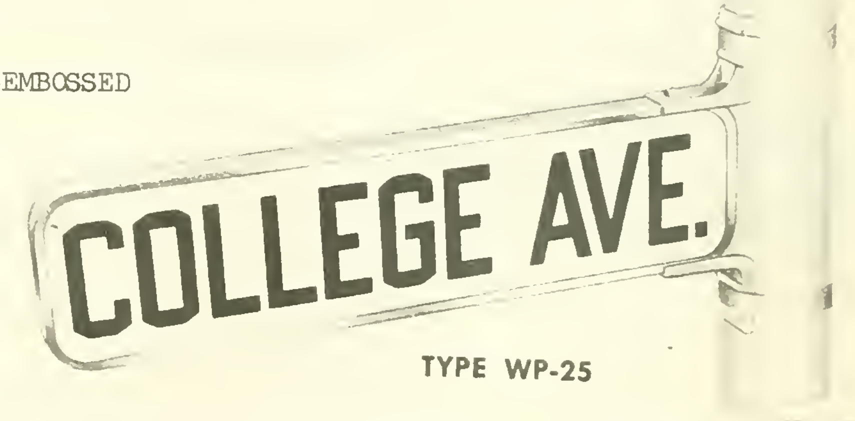
CRISS-CROSS TYPE 38-B

BAKED ENAMEL-EMBOSSED



WING TYPE WB-51

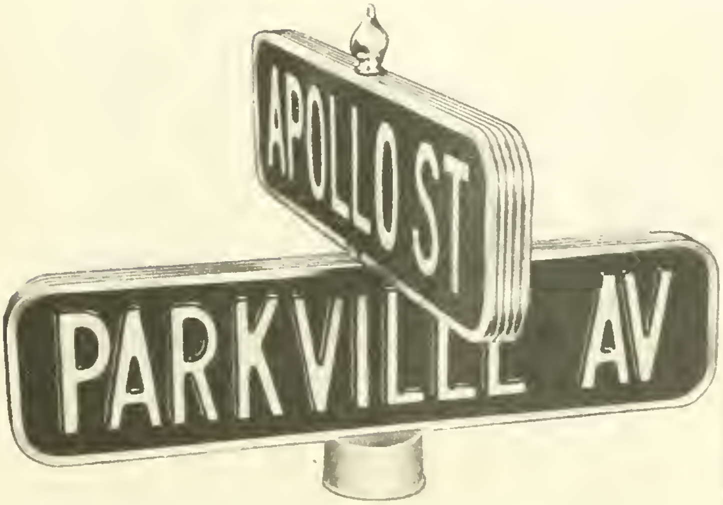
BAKED ENAMEL-EMBOSSED



TYPE WP-25

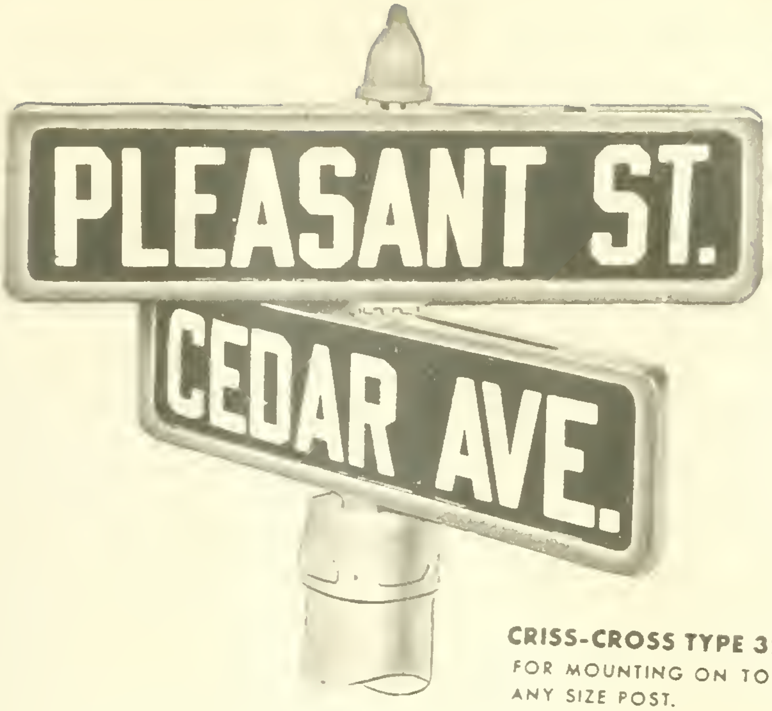
PORCELAIN FLAT-EXTRUDED ALUMINUM FRAME

MUNICIPAL STREET SIGN CO., INC.



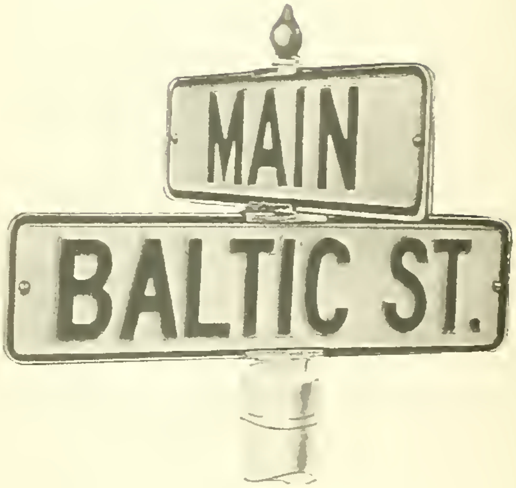
TYPE S-40 PORCELAIN EMBOSSED EXTRUDED ALUMINUM FRAME

PLATE 3.5.2

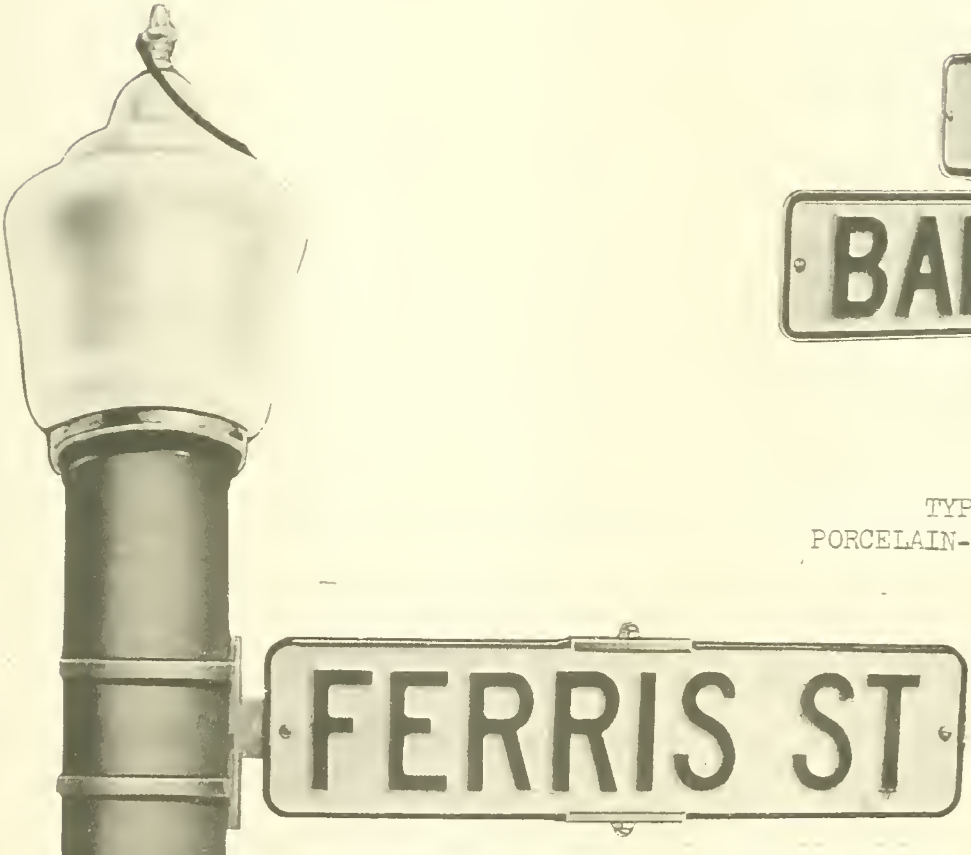


CRISS-CROSS TYPE 32-CY
FOR MOUNTING ON TOP OF
ANY SIZE POST.

PORCELAIN IN CAST ALUMINUM FRAME



TYPE 37B
PORCELAIN-EMBOSSED



TYPE WP-52
PORCELAIN-EMBOSSED

MUNICIPAL STREET SIGN, CO., INC.

PLATE 3.5.3

3.6 REFUSE RECEIPTACLES

This item of street furniture can be quite controversial as it is something that no logical planner wants, but it is a necessary component. Boston has attempted to foster a "Litter Bug" campaign with some success although the city is not a clean city and everything possible should be done to improve a bad situation.

Refuse or trash receptacles are frequently not a thing of beauty in spite of their importance. If they are not prominently placed, no one will use them and the streets will be more littered. The idea of placing them in small parks or isolated areas is excellent aesthetically but this defeats the primary purpose--collection and depository of refuse and trash.

The use of open wire baskets either on the ground or attached to poles is not recommended as the appearance of the refuse and trash detracts from the general appearance of the street. (see Plates 3.6.5, 3.6.6 and 3.6.7)

A number of manufacturers were contacted and Plates 3.6.1 through 3.6.7 pictorially show some of the refuse receptacles available. There are undoubtedly other companies which manufacture these products.

3.6.1 Diversified Plastics, Inc.

This company manufactures a plastic refuse receptacle

(Plate 3.6.1). This receptacle could have many advantages over the sheet metal receptacles which are most common. The company claims that the lack of corrosion and its comparative weight advantage are serious considerations in its selection. The design is not unpleasing but as pointed out, such a piece of street furniture is not normally a contender in design competition. We consider this one of the best refuse receptacles available.

3.6.2 John Wood Company

This company manufactures a round and a square refuse receptacle (Plates 3.6.2 and 3.6.3). Both are well designed and either would answer the intended purpose.

3.6.3 F. H. Lawson Company

This company manufactures a large line of refuse receptacles from their Torpedo Type (Plate 3.6.4) down to Flaring Ash Cans with removable, self-closing top units. Model "509" is a 15½ inch round receptacle and Model 2230 to 2260 vary in size from 16 to 22 inches square. Both of these receptacles seem to be well designed and well built. Plate 3.6.5 shows the model 6006 Torpedo style receptacle which can be mounted on a pole. The apparent disadvantages appear to be a small opening on the top, not protected from rain and snow. We do not recommend this pole mounted receptacle.

3.63A Jackson Company

This company manufactures a well designed aluminum refuse or litter receptacle (Plate 3.6.3A).

3.6.4 Tarrant Manufacturing Co.

This company manufactures the conventional refuse receptacle. Their Paragon - Type 48A (Plate 3.6.6) is a ruggedly constructed receptacle and its seamless construction of smooth, rounded hood provides maximum weather protection.

3.6.5 Vega Industries, Inc.

In our opinion, this company manufactures the best available pole mounted receptacle (Plate 3.6.6). This equipment is well constructed, easy to empty and has a good size, weather-proof refuse door. Of all the material at hand, we recommend this Vega San-Equip Pole Mounted Waste Receptacle.

3.6.6 Norwich Wire Works, Inc.

This company only manufactures wire mesh refuse receptacles (Plate 3.6.7). These we do not recommend for the Redevelopment Program.

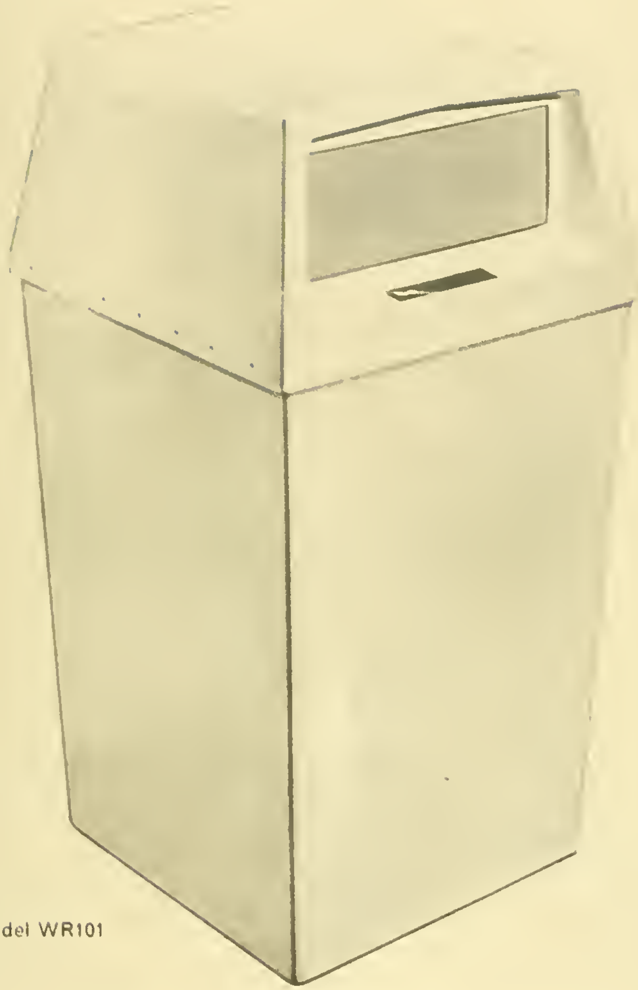
3.6.7 Designers Metal Company

Like Norwich, this company manufactures wire mesh

refuse receptacles (Plate 3.6.7). These we do not recommend for the Redevelopment Program.

3.6.8 Howard Metal Craft Co.

This company manufactures the refuse receptacles now used in Boston. Although this is a good product we do not recommend it for use in the Redevelopment Program due to the fact that an open wire basket is used (Plate 3.6.8).


Model WR101

WHY FIBER GLASS IS SO SUITABLE AS A WASTE RECEPTACLE MATERIAL:

Won't Rust! Can't Rust!

Even under conditions of high humidity fiber glass resists pitting and corrosion, keeps its original good looks for years!

It's Built to Last

All component parts are molded with smooth contours and rounded edges to prevent unsightly dirt accumulations.

It's Lightweight, Easy to Manage

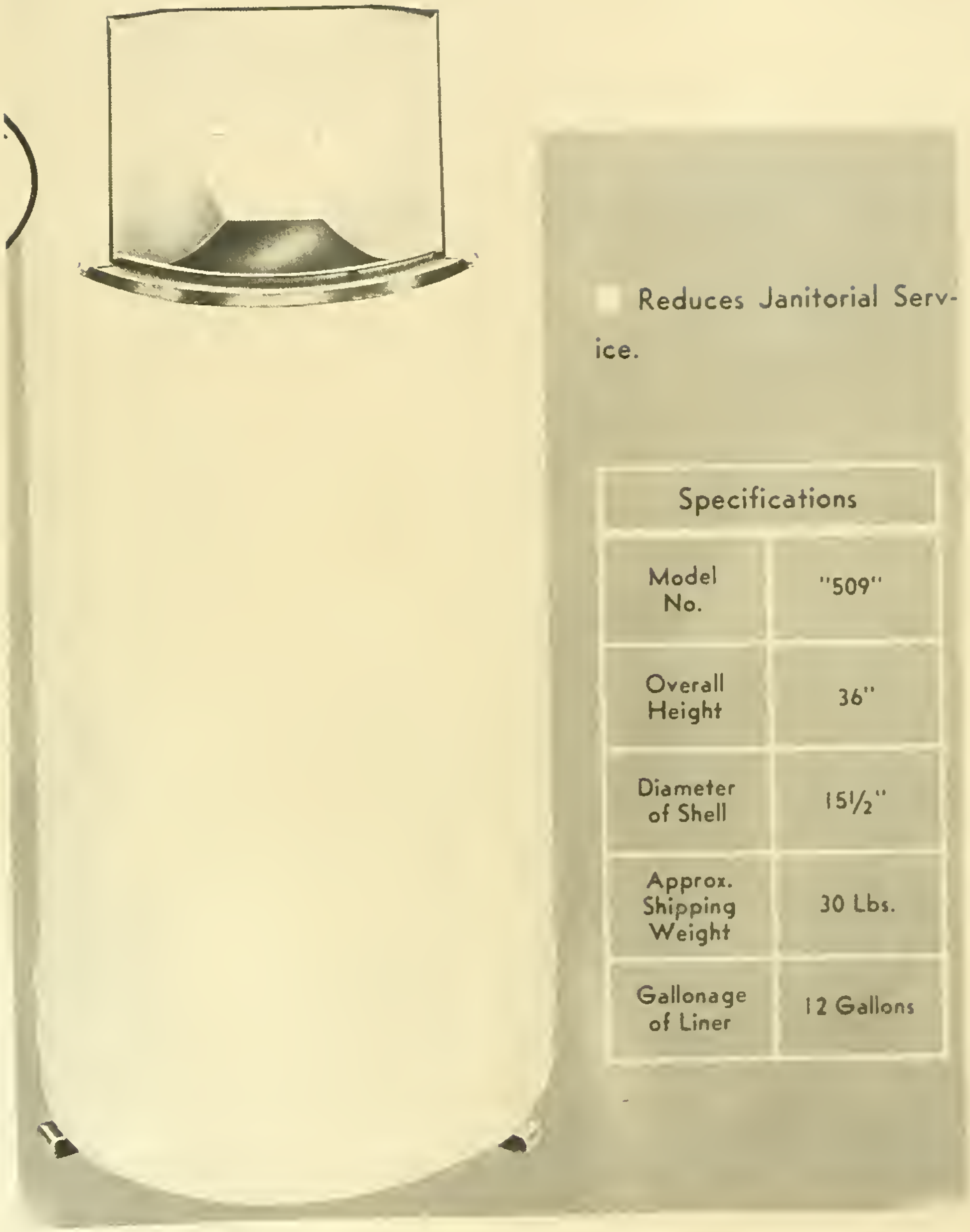
Initial installation is a one-man operation. Inner reservoir and contents lift out easily for periodic emptying.

It's Easy to Clean, Keep Clean

No expensive refinishing or re-painting necessary. Sponges clean with a damp cloth or a light hosing down occasionally.

DIVERSIFIED PLASTICS, INC.

PLATE 3.6.1



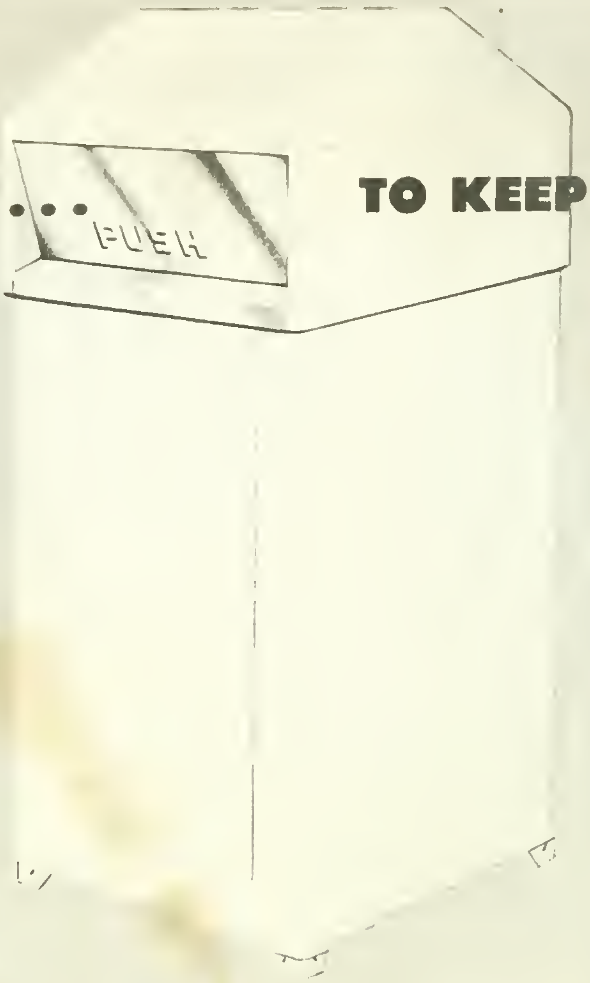
■ Reduces Janitorial Service.

Specifications	
Model No.	"509"
Overall Height	36"
Diameter of Shell	15½"
Approx. Shipping Weight	30 Lbs.
Gallonage of Liner	12 Gallons

JOHN WOOD COMPANY

PLATE 3.6.2

FLAPS SWING IN . . . TO KEEP RAIN OUT



Full Width Flaps Swing Under — and Operate Independently for Easier and Safer Disposal. Flaps and/or Threshold are available in Stainless Steel or painted in choice of color.

Handsomely Styled • Sturdily Built • Long Life • Low Maintenance Cost.

Long Life Enameled Outer Shell – choice of color.

Stainless Steel Legs Prevent Floor Damage.

Solid Steel Construction.

Rounded Corners Prevent Snagging.

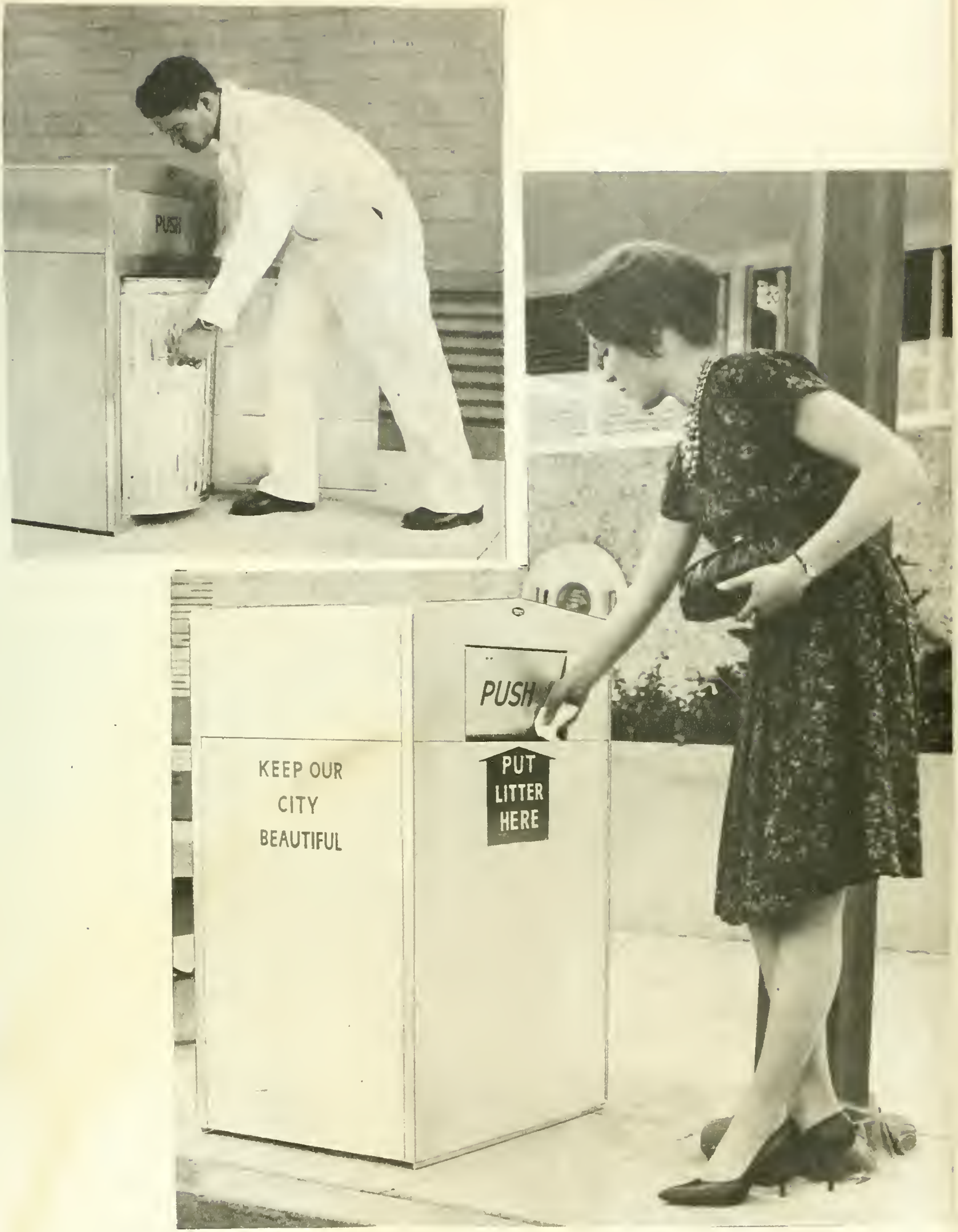
A Superior product with exclusive features that cut cleaning costs. Easy to use and easy to empty. Ends messy water soaked papers that invite corrosion and increase collection costs.

SPECIFICATIONS

Model No.	Size of Base Inches	Body Height Inches	Height Over-all Inches	Approx Shipping Weight	Equipped With	RECOMMENDED LOCATION
2230	16 x 16	26½	38	43.1 lbs.	1 Burlap Bag	Wash rooms, corridors, offices, restaurants, etc
2240	16 x 16	26½	38	43.1 lbs.	1 Burlap Bag	For outdoor use on streets, parks and grounds.
2250	22 x 22	35½	50	79.9 lbs.	1 Burlap Bag	For general use where there is a great amount of waste.
2260	22 x 22	35½	50	79.9 lbs.	1 Burlap Bag	For outdoor use on streets, parks and grounds.

Also furnished with Metal Liners or Cotton Drill Bags.

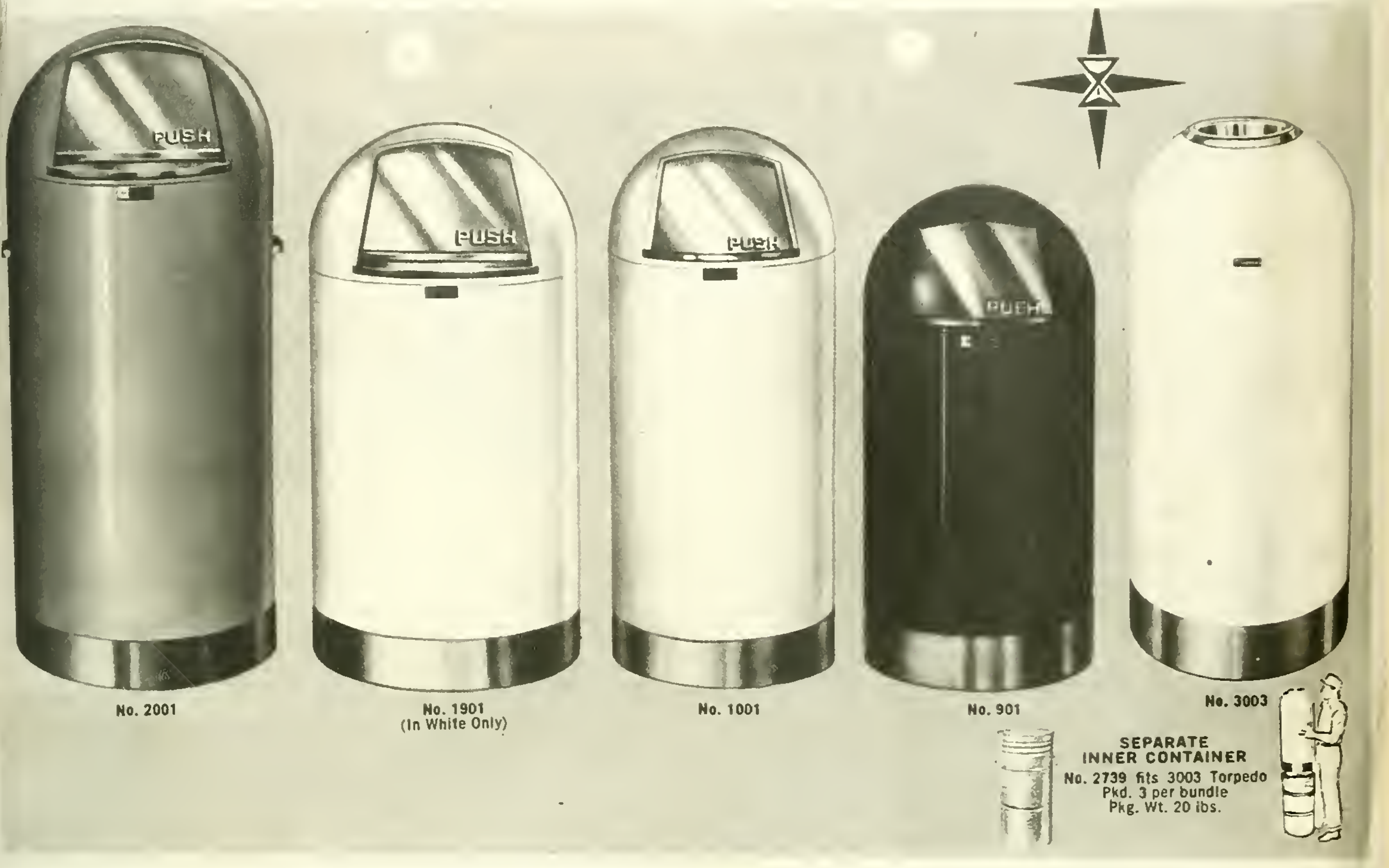
JOHN WOOD COMPANY



ALUMINUM REFUSE RECEPTACLE

JACKSON COMPANY

PLATE 3.6.3A



LAWSON TORPEDO® WASTE RECEPTACLES

Attractive and modern . . . years ahead of anything of its kind in styling and construction . . . a perfect solution to waste disposal problems. Graceful lines and stainless steel trim of the Lawson Torpedo® receptacle make it most economical and practical to maintain. Replacement inner containers available.

- Self-closing push door of stainless steel, also stainless steel door ledge.
- Rubber door silencer.
- Rounded top and sides, easy to clean.
- Wide stainless steel band at bottom, curled under, protects floor, keeps mop from staining its lustre.
- Dipped galvanized nestable inner containers with side handles are • fireproof • scuffproof and rust resistant.
- Shell Bonderized for protection against rust.

Colors: WHITE, RED, GREY, and MIST GREEN. (Except No. 1901 · in WHITE only.)

SPECIFICATIONS

No.	Shell	Container	Capacity	Pkd.	Weight Each Complete With Inner Container
901	15 x 31½″	13 x 21½″	12 gal.	1	27 lbs.
1001	15 x 37″	13 x 27″	15 gal.	1	30 lbs.
1901 (white only)	18 x 36″	16 x 24¼″	17 gal.	1	40 lbs.
2001	18 x 42″	16 x 31″	21 gal.	1	50 lbs.

Outer shell lifts
easily from metal
inner container
for quick
emptying.

SEPARATE INNER CONTAINERS

No. 2789 fits 901 Torpedo
Pkd. 3 per bundle
Pkg. Wt. 17 lbs.

No. 2739 fits 1001 Torpedo
Pkd. 3 per bundle
Pkg. Wt. 20 lbs.

No. 2799 fits 1901 Torpedo
Pkd. 3 per bundle
Pkg. Wt. 24 lbs.

No. 2769 fits 2001 Torpedo
Pkd. 3 per bundle
Pkg. Wt. 30 lbs.

POPULAR DROP-IN STYLE TORPEDO

Designed Mainly For Indoor Use

Built to the same quality specifications as the model 1001 swing door style shown at left.

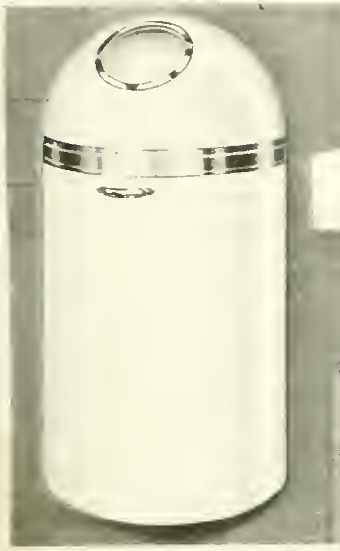
Its baked enamel finish and stainless steel trim will last year after year with a minimum of maintenance. 6-inch opening at top has stainless steel collar — nothing to deteriorate. Complete with 15 gallon dip galvanized, moisture tight inner container equipped with side handles for easy emptying. Colors: WHITE only.

SPECIFICATIONS

No.	Shell	Container	Capacity
3003	15 x 37″	13 x 27″	15 gal.

Weight Each Complete With Inner Container: 30 lbs.

F. H. LAWSON COMPANY



Empties As Easy As a Waste Basket

NO BAGS TO BUY— NONE TO THROW AWAY . . .

A gentle lift releases moisture tight receptacle for emptying — Snaps easily and quickly into position after emptying.

No. 6006 Lawson Torpedo Style
WALL HUNG WASTE RECEPTACLE
Space Saving • Modern Appearance

This attractive waste receptacle attaches easily to the wall with wood screws furnished—needn't be moved around—can't be bumped over—no mop to mar its snow white baked enamel finish and stainless steel trim. Saves space and improves area appearance wherever used—especially desirable where floor space is limited.

Made of heavy gauge steel, bonderized after forming for protection against rust. 6-inch opening at top has stainless steel collar, nothing to deteriorate.

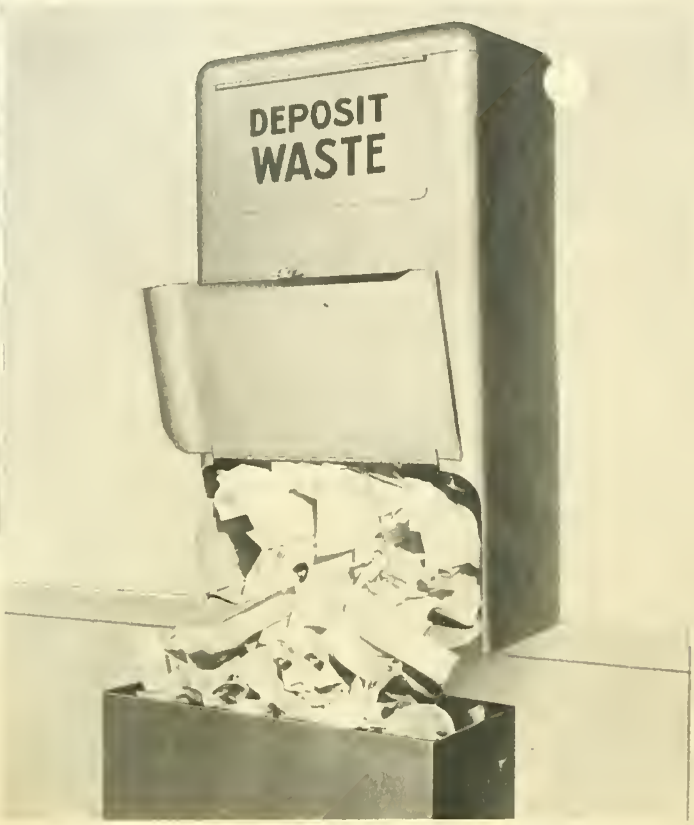
Mastic Kit No. 2707 for attaching receptacle without screws available at slight additional cost.

SPECIFICATIONS

No.	Capacity	High	Wide	Deep	Weight	Packed
6006	12½ gal.	36"	18"	9"	30 lbs.	1

F. H. LAWSON COMPANY

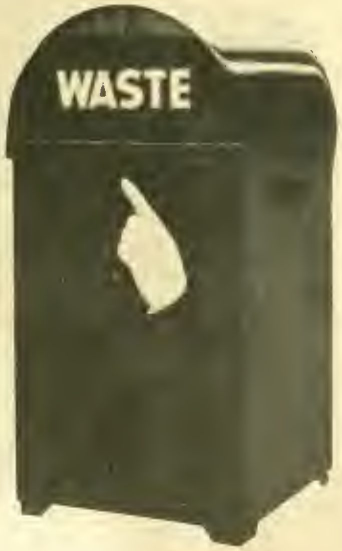
PLATE 3.6.5



VEGA INDUSTRIES, INC.

WASTE EASILY REMOVED No handling needed for unloading. Sloping bottom assures fast and complete removal of waste through lower door.

PARAGON - Type 48F



This Paragon, Type 48F, Receptacle is ruggedly constructed . . . all welded, heavy gauge steel . . . for either outside or inside use. It's attractive, easy to use (without scraped fingers), and simple to empty.

Seamless construction of the smooth, rounded hood provides maximum weather protection. The 2 vertically hung, self-closing doors close tight without the use of springs. This top lifts off quickly and locks in place by 2 concealed clips.

The body has stainless steel feet and 2 heavy handles — no tearing edges anywhere. Large flat sides are ideal for advertising posters.

Finish is baked. dark green enamel. Available, if desired: any other colors; stenciled lettering.

TARRANT MANUFACTURING COMPANY

CONSTRUCTION

8 Ga. Wire Mesh

~

8 Vertical Braces with Interlocking Ring.

~

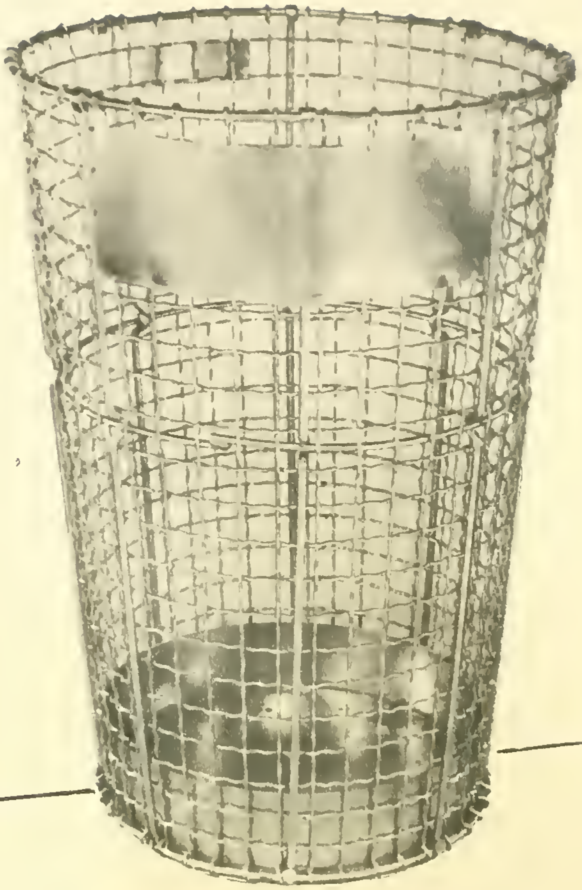
3½" Deep Sheet Metal Pan.

~

Angle Iron Ring. Reinforcing Bottom.

~

Hot Dip Galvanized after fabrication.



34" Deep.

~

22" Top.

~

18" Bottom.

~

Approx wt. 43 lbs.

~

6" x 16" Blank Sign Plate.

83-C

NORWICH WIRE WORKS, INC.

SPECIFICATIONS

14 gauge 5/8" Expanded Metal—steel (C.R.S.)

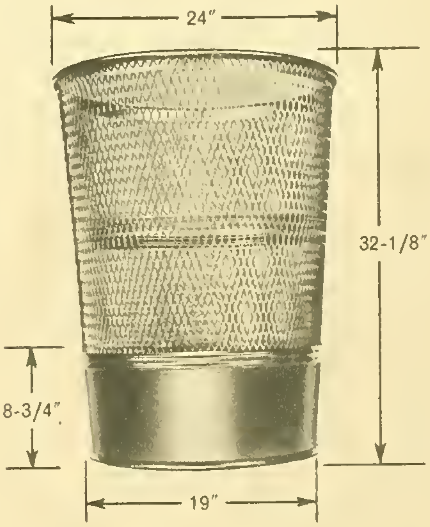
2 horizontal steel reinforcements

18 gauge steel (C.R.S.) skirt and dish bottom to keep small trash from falling through.

Finish: Black (no finish); Galvanized (hot dipped) or special painting on application.

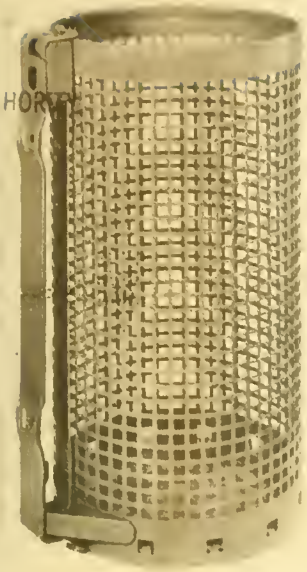
Weight: Black—37 lbs.
Galvanized—40 lbs.

Top Diameter: 24"
Height: 32-1/8"
Bottom Diameter: 19"
Skirt Height: 8-3/4"



DESIGNERS METAL COMPANY

PLATE 3.6.7



CAT. NO. H1

Basket is mounted on bracket with a simple patented locking device. One quarter turn with special wrench loosens basket for easy emptying. Bracket may be mounted on pole or wall by means of bolts or strapping. Special wrench*furnished at no extra charge. Handsome sign*also included free.

SPECIFICATIONS:

Material:	16 gauge perforated steel
Coating:	tough, durable, melamine
Height:	24 inches
Weight:	16 lbs. (Shipped in individual corrugated containers)
Diameter:	12 inches
Cubic Content:	2,400 cubic inches

*H-100 EXTRA SIGNS AVAILABLE
*H-200 EXTRA WRENCHES AVAILABLE

BOSTON, MASSACHUSETTS
HOWARD METALCRAFT COMPANY

PLATE 3.6.8

4.0 APPENDIX

4.1 LIGHTING STANDARDS AND FIXTURES

4.1.1 Union Metal Manufacturing Company

Canton 5, Illinois

C. Frear - Manager Outdoor Lighting Products

New England Representative

Union Metal Manufacturing Company

430 Lexington Street, Newton 66, Mass.

A. H. Hahn, New England District Manager, 332-8578

4.1.2 American Concrete Division,

Union Metal Manufacturing Company

Dahringer Road, Waukegan, Ill.

New England Representative

A. H. Hahn, New England District Manager, 332-8578

4.1.3 Flaff & Kendall

84 Foundary Street, Newark 5, N. J.

New England Representative

Charles D. White Co.

215 A Street, Boston 10, Mass., 268-9050

4.1.4 Sterner Lighting, Inc.

Winstead, Minn.

George F. Nye - Sales Manager

New England Representative

Robert L. May Associates, Inc.

39 Kingston Street, Boston 11, Mass.

Vernon F. Williams, Sales Engineer, 426-4730

4.1.5 Millerbernd Manufacturing Co.

Winstead, Minn.

C. O. Brandser

4.1.6 Halophane Company, Inc.

1120 Avenue of the Americus, New York 36, N. Y.

A. W. Fowle

New England Representative

Master Builders

39 Kingston Street, Boston 10, Mass.

E. J. Perkins

4.1.7 Line material Industries,

McGraw-Edison Company, Milwaukee 1, Wisc.

Roy E. Daub, Field Engineer

4.1.8 Revere Electric Manufacturing Co.

7420 Lehigh Avenue, Chicago 48, Ill.

4.1.9 Par Light Manufacturing Company

Milan, Ill.

A. M. Harris, Sales Manager

4.1.10 General Electric Company

Outdoor Lighting Department, Hendersonville, N. C.

R. L. Smith, Sales Specialist

4.1.11 Graybar Electric Company, Inc.

420 Lexington Avenue, New York 17, N. Y.

R. C. Dunn, General Outside Construction Sales Manager

New England Representative

B. T. Gately, 345 Harrison Avenue, Boston 18, Mass., 482-9320

4.1.12 Hapco Division--Hubbard & Company

560 Bercik Street, Elizabeth 1, N. J.

New England Representative

Paul J. Mahoney, District Manager

28 Deerfield Road, Norwood, Mass.

4.1.13 mcPhilben Lighting, Inc.

1329 Willoughby Avenue, Brooklyn 37, N. Y.
Edward L. Gluck, General Sales Manager
New England Representative
Close Electrical Agents, Inc.
1310 Tremont Street, Boston 20, Mass., 445-8311

4.1.14 American Electric Manufacturing Corp.

3271 Chelsea Avenue, P. O. Box 5142, Memphis 8, Tenn.
James E. Freeman, Marketing Manager
New England Representative
Robert L. May Associates, Inc.
39 Kingston Street, Boston 11, Mass.
Vernon F. Williams, Sales Engineer, 426-4730

4.1.15 Kerrigan Iron Works Company

P. O. Box 479, Nashville, Tenn.
T. F. Barney, General Sales Manager

4.1.16 Westinghouse Electric Corporation

Pittsburgh, Pa.
New England Representative
Westinghouse Electric Corporation
10 High Street, Boston, Mass.
P. N. Clerke, Lighting Specialist, 542-0600

4.2 FIRE HYDRANTS

4.2.1 Darling Valve & Manufacturing Co.

Williamsport, Pa.

New England Representative

Public Works Supply Co.

93 Brookline Street, Lynn, Mass.

Walter A. Arnold, 592-7323

4.2.2 Mueller Company

Decature, Ill.

New England Representative

Mueller Company

24 Ravine Road, Wellesley Hills, Mass.

Stanley B. Johnson, 235-0523

4.2.3 The A. P. Smith Manufacturing Co.

East Orange, N. J.

New England Representative

The A. P. Smith Manufacturing Co.

Box 582, Springfield, Mass.

John B. Donohoe, District Sales Manager

Longmeadow - LO 7-7222

4.2.4 Kennedy Valve Mfg. Co., Inc.

Elmira, New York

J. R. Ervin, Vice-President - Sales

4.2.5 Travers City Iron Works

P. O. Box 348, Travers City, Michigan

William A. Royce, President

4.2.6 M. & H. Valve & Fitting Company

P. O. Box 158, Anniston, Alabama

C. B. Gabosch, Manager

4.3 POLICE SIGNAL BOXES AND STANDARDS

4.3.1 The Gamewell Company

1242 Chestnut Street, Newton 64, Mass.

4.3.2 Phon Alarm, a division of

Switching Systems, Inc.

13901 Saticoy Street, Van Nuys, Calif.

4.3.3 Automatic Electric, a division of

General Telephone and Electronics

Automatic Electric Sales Corporation

Northlake, Ill.

4.3.4 B. & B. Engineering Corporation

Norwood, La.

Edward A. Brass

4.3.5 Harrington Signal Company

116 Seventeenth Street, Moline, Ill.

D. A. Oppenheimer, Manager

4.3.6 Notifier Corporation

3700 North 56th Street, P. O. Box 4584, Lincoln 4, Neb.

4.3.7 New England Telephone & Telegraph Co.

Boston, Mass.

Donald F. Cotter, Account Manager, 743-2520

4.4 FIRE ALARM BOX AND STANDARD

4.4.1 Crouse-Hinds Company

Syracuse, New York

New England Office

Crouse-Hinds Company

318 Harvard Street, Brookline 46, Massachusetts

John F. Jacquemot - Product Engineer

4.4.2 The Gamewell Company

Newton Upper Falls 64, Massachusetts

Charles T. Smith - Sales Manager 332-3227

4.4.3 B. & B. Engineering Corporation

Norwood, La.

Edward A. Brass

4.4.4 Harrington Signal Company

116 Seventeenth Street, Moline, Illinois

D. A. Oppenheimer - Manager

4.4.5 Notifier Corporation

3700 North 56th Street, P. O. Box 4584, Lincoln 4, Neb.

4.4.6 New England Telephone & Telegraph Co.

Boston, Mass.

Donald F. Cotter, Account Manager, 743-2520

4.5 STREET AND TRAFFIC SIGNS

4.5.1 3M Company

2501 Hudson Road, St. Paul 19, Minn.

R. Warren Forrest, Sales Representative

Reflective Products Division

New England Representative

3M Company

155 Fourth Avenue, Needham Heights 94, Mass.

449-0300

4.5.2 Municipal Street Sign Co., Inc.

College Point 56, Long Island, N. Y.

Jerome R. Brook, Vice-President

4.5.3 Lyle Signs, Inc.

2720 University Avenue SE, Minneapolis 14, Minn.

E. F. Anderson

New England Representative

Joseph M. Barry

78 Cambridge Street, Charlestown 29, Mass.

4.5.4 Prismo Safety Corporation

Huntingdon, Pa.

Jack W. Lang, Administrative Assistant

4.5.5 Flexible Safety Zoning Co.

750 South Clinton Street, Chicago 7, Ill.

Roy H. Grayson, President

4.5.6 Grimm Stamp & Badge Co.

8105 Rosalie Avenue, St. Louis 17, Mo.

4.5.7 Gropher Stamp & Die Co.

Chicago Avenue & Custer St., St. Paul 7, Minn.

4.5.8 Miro-Flex Company, Inc.

P. O. Box 514, Wishita 14, Kan.

J. D. Gebert, Sales Manager

4.5.9 Independent Metal Strap Co., Inc.

230 Third Street, Brooklyn 15, N. Y.

Henry B. Fisk, Sales Manager

4.6 REFUSE RECEPTACLES

4.6.1 Diversified Plastics, Inc.

1000 Northwest 51 Place, Fort Lauderdale, Fla.

4.6.2 John Wood Company

509 Front Avenue, St. Paul 17, Minn.

C. J. Anderson, Assistant to Sales Manager

New England Representative

Cortes Ward Company

10 Herbert Street, New York, N.Y.

4.6.3 F. H. Lawson Company

Cincinnati 4, Ohio

E. G. Harvey, Sales Manager Institutional Division

4.6.4 Jackson Company

P. O. Box 104, Pomona, Calif.

Jackson Kingsley

4.6.5 Tarrant Manufacturing Co.

27-29 Jumel Place, Saratoga Springs, N. Y.

Van Wyck B. Conlee, Sales Manager

4.6.6 Vega Industries, Inc.

Syracuse 5, N. Y.

R. C. Hagadorn, Assistant General Sales Manager

4.6.7 Norwich Wire Works, Inc.

Norwich, N. Y.

Thomas D. Fernalld - Secretary

4.6.8 Designers Metal Company

3701 S. Greenwood Avenue, Chicago 19, Ill.

W. T. Munro, Sales Administrator

4.6.9 Howard Metalcraft Co.

6th and Minor Streets, Emmaus, Pa.

Leonard A. Hyman, General Manager

New England Representative

Dyar Sales & Machinery Company

247 Third Street, Cambridge 42, Mass.

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BRA
Boston Redevelopment Authority
Planning Department
Boston Redevelopment Authority
Available Street Furniture for
Redevelopment Projects